Vol. XV. NOVEMBER. No. 5.

THE

PENNSYLVANIA

SCHOOL JOURNAL.

ORGAN OF THE

Pennsylvania State Teachers' Association,

AND OF THE

DEPARTMENT OF COMMON SCHOOLS.

That which makes a good Constitution must keep it, viz.: men of wisdom and virtue; qualities that, because they descend not with worldly inheritance, must be carefully propagated by a virtuous education of youth. —PENN.

THOS. H. BURROWES, EDITOR.

LANCASTER:
WILLIAM B. WILEY, DUKE STREET.
1866.

TERMS: One Dollar a Year, invariably in Advance.

L of C.

FOUR FIRST-CLASS PERIODICALS!!

Messrs. TICKNOR & FIELDS invite the attention of TEACHERS and PARENTS to their PERIODICAL PUBLICATIONS.

The Atlantic Monthly.

The Atlantic Monthly, by general consent, stands at the head of American magazines. It numbers among its contributors the most eminent writers of the day, both in Prose and Poetry; and its pages have always reflected what is best in American literature. It has reached a circulation never before gained by any American magazine of its class, and it has, by the long period of its existence and the worth of its contributors, become firmly fixed in public esteem.

The following are among the most prominent regular contributors:—

H. W. LONGFELLOW.	DONALD G. MITCHELL.	BAYARD TAYLOR.
R. W. EMERSON.	G. C. HAZEWELL.	HARRIET B. STOWE.
LOUIS AGASSIZ.	J. G. WHITTIER.	GAIL HAMILTON.
WM. CULLEN BRYANT.	O. W. HOLMES.	E. P. WHIPPLE.
J. T. TROWBRIDGE.	JAS. RUSSELL LOWELL.	

TERMS: Single Subscriptions, $4.00 a year, in advance. CLUB RATES.—Two Copies for $7.00; Five Copies for $16.00; Ten Copies for $30.00; and each additional copy, Three Dollars. For every Club of Twenty Subscribers an extra copy will be furnished *gratis*, or Twenty-One Copies for Sixty Dollars.

Our Young Folks:

AN ILLUSTRATED MAGAZINE FOR BOYS AND GIRLS.

The publication of **Our Young Folks** was begun in January, 1865, with the view of furnishing the Youth of the Country a periodical literature of higher character than had hitherto been offered them. The immediate and unparalleled success of the magazine proved the existing need for it, and its reception thus far convinces the publishers that it needs only to be known to win an almost universal circulation. The high praise which it has received from clergymen, educators, the press, and the public, warrants its commendation to parents and teachers throughout the land, as a source of instruction and entertainment to the young. Among the contributors to **Our Young Folks** are the following:—

H. W. LONGFELLOW.	KATE PUTNAM.	"CARLETON."
BAYARD TAYLOR.	JOHN G. WHITTIER.	OLIVER OPTIC.
R. H. STODDARD.	HARRIET E. PRESCOTT.	ROSE TERRY.
HARRIET B. STOWE,	MRS. A. D. T. WHITNEY.	MRS. L. MARIA CHILD.
T. W. HIGGINSON.	AUTHOR OF "SEVEN LITTLE SISTERS."	AUTHOR OF "FARMING FOR BOYS."
DIO LEWIS.	T. B. ALDRICH.	

ILLUSTRATIONS:

Our Young Folks is fully illustrated with engravings by the best American artists.

TERMS: Single Subscriptions, $2.00 a year, in advance. CLUBS.—Three Copies for $5.00; Five Copies for $8.00; Ten Copies for $15.00: Twenty Copies for $30.00; and an extra copy *gratis* to the person forming the Club of Twenty.

Every Saturday:

A JOURNAL OF CHOICE READING MATTER FROM FOREIGN CURRENT LITERATURE.

This journal is published weekly, and its plan is to reproduce for American readers the choicests selections from the English and Continental periodicals. Its plan embraces Incidents of Travel and Adventure, Essays Critical and Descriptive, Serial Tales, Short Stories, Poems, Biographies, Literary Intelligence, etc., in connection with judicious selections from the admirable popular papers on Science which are constantly appearing in foreign periodicals.

Arrangements have been made by which the most attractive features of the English Magazines and Weeklies are at once transferred to the pages of **Every Saturday.**

TERMS: Single Numbers, 10 cents; Subscription Price, $5.00 per year in advance. Monthly Parts are issued containing 128 pages each, handsomely bound in an attractive cover, price 50 cents; Subscription Price, $5.00 a year in advance. CLUBBING ARRANGEMENT.—Subscribers to any of the other periodicals published by TICKNOR & FIELDS will receive **Every Saturday** for $4.00 per year, in advance.

The North American Review.

THE LEADING QUARTERLY OF THE COUNTRY,

Edited by Prof. JAS. RUSSELL LOWELL and CHAS. ELIOT NORTON, Esq.

THE NORTH AMERICAN REVIEW has for more than fifty years maintained and advanced the standard of American letters and scholarship, and defended the principles upon which American institutions rest. It addresses itself to the limited though still large class in the community who are themselves the leaders and formers of public opinion; to those who are not averse to serious thought on the most important topics of the times; to those who desire to know and be instructed by men who have made a study of special subjects. It holds up a high standard of thought, of learning, of style, and aims—by vigorous and independent criticism—to improve the public taste. The former and present contributors to the Review include those American names most eminent for scholarship, literary culture, and statesmanship.

THE NORTH AMERICAN REVIEW is published quarterly, on the first days of January, April, July, and October, in numbers of about three hundred pages each, containing matter equal to four ordinary octavo volumes.

TERMS: $6.00 per year, in advance. Subscribers to any of the other periodicals published by TICKNOR FIELDS will receive the REVIEW for $5 00 per year, in advance.

CLUB RATES.—ATLANTIC MONTHLY and OUR YOUNG FOLKS together, $5.00; ATLANTIC MONTHLY, OUR YOUNG FOLKS, and EVERY SATURDAY, $9.00; OUR YOUNG FOLKS and EVERY SATURDAY, $6.00; all four of the periodicals, $14.00.

POSTAGE on all except the Review must be paid at the office where the periodicals are received.

It will be the aim of the publishers, by constant watchfulness and by liberality in outlay, to maintain for their periodicals the highest character in the respective fields whic they occupy.

☞ Special inducements are offered to Teachers to procure subscribers to our periodicals. Agents wanted throughout the country. Address the publishers,

Sept., '66-6m. **TICKNOR & FIELDS,** 124 Tremont-st., Boston

THE

PENNSYLVANIA SCHOOL JOURNAL.

Vol. XV.—No. 5. **NOVEMBER, 1866.** **Whole No. 173.**

THO. H. BURROWES, *Editor & Publisher.* *Associate*, J. P. McCASKEY

Instruction of Soldiers' Orphans.

An unusually large portion of this number is occupied by the Principles upon which and the Regulations according to which the more advanced schools for soldiers' orphans are intended to be conducted. This excludes some matter of a more general character; but a sufficient apology for the space thus taken will be found, it is hoped, in the importance of the subject.

The Teacher and even the general reader will perhaps consider these principles and rules with some interest, especially these portions of them which relate to the methods of school-room study and class-room recitation. They will be found somewhat at variance with the prevailing ideas and modes, but, as the writer believes, none the less in accordance with the nature of knowledge in relation to ignorance, and the proper efforts of and aids for the mind in escaping the one and acquiring the other. At any rate, they are the conclusions of over thirty years of close observance of the schools; and they will now be thoroughly tested, if life and present relations to these schools be continued sufficiently long.

It no doubt may happen that some teachers, now in the schools, will object to this method on professional grounds, or decline to devote to it the time required. If so, it is believed that others can be found who will afford it a full trial, both out of love for the orphan and the cause of education.

The State Superintendency.

DEPARTMENT OF COMMON SCHOOLS,
HARRISBURG, Oct. 18, 1866.

To His Excellency A. G. Curtin:—SIR:—I hereby tender my resignation as Superintendent of Common Schools of the Commonwealth of Pennsylvania, to take effect on the first day of November, 1866.

It is my wish that, if you shall deem it for the interest of the cause of the common school system of the State, you shall appoint as my successor, J. P. WICKERSHAM, of Lancaster county.

Yours, with high sentiments of respect and kind regard,
C. R. COBURN.

This singular document is clipped from an exchange, and is the only thing like an official announcement of the change to which it relates, that we have seen. From another source we learn that the new officer was to enter upon the discharge of his important trust, and no doubt did so, upon the day named in the resignation of his predecessor.

It is known that we have been opposed to the appointment of Prof. Wickersham, on account of certain extreme views he is now believed to entertain and may act upon in his official capacity,—to the injury, we think, if attempted, of our great State system of Education. Were it not for this, there was no man in the State whom we previously preferred for the office.

But we have lived long enough to know that mere theory out of office is often found not to be expedient in office; and that the responsibilities of power give a different appearance to the actual duties of power,—often showing favorite theories to be nothing but impracticable hypotheses. So we hope it will be here; and we shall therefore now only add, that for every right act and sound measure of the new State Superintendent, this *Journal* will have its hearty cheer of encouragement, while, as heretofore, for error or approaching injury to the system, it will also have its prompt rebuke, with the reasons therefor.

The Academies of the State.

Last month we completed the remarks intended, for the present, to be made upon the Collegiate system of the State. Some observations upon the class of institutions next in order and bearing a close relation to the Colleges, now naturally suggest themselves.

By Academies, is meant that class of institutions, whether for males or females, but mostly boarding schools, in which preparatory instruction is imparted to such as design taking a college course; in which many young men who never enter college at all, receive their final school instruction before entering upon the actual duties of life; and in which nearly all the females of the State who aspire to a higher education acquire their final school training. All these have their distinctive denominations, but all are of the class and may therefore be embraced within the term of Academies; a peculiar feature of nearly all also being that the languages, ancient and modern, are included in the course of instruction.

There is another class of schools, which, in regard to their course of instruction, also belong to the academic family: These are the High Common Schools of the cities and larger towns when

the schools are properly graded. But being all day-schools and also public institutions, and having no other similarity to the Academy than is found in the course of studies,—they need not be here specially considered.

As to the private Academies, two questions are to be considered: 1. Are they an essential portion of our State system of Education? And if so, 2. Should they receive pecuniary aid from the State?

1. Like and to promote similar purposes as the Colleges, the Academies are believed to be a necessary and integral portion of our State scheme of education; and for the same general reasons they are to be continued, with certain improvements, on their present basis.

The common school, owing to sparseness of population and other causes, has not yet produced and probably for many years will not, if it ever shall produce, in every part of the State and within reach of all the citizens, as day schools, (which is an essential feature of the common school,) High Schools in sufficient number to provide higher training for the few in every district who shall aspire thereto. But,—as there always will be those aspirants in all the districts, and as their wants will and must be met,—this can only be done by the establishment of private and generally of Boarding schools, or in other words, of Academies, for their instruction. Therefore, the Academy, of whatever class as to sex and course, is essential and will continue.

In addition to this, the opulent from the large cities and towns will seek such institutions in the healthful retirement of the country, for their children; many denominationists will demand such institutions, in the care of their own church, for theirs; and for a long time to come, we fear, many of the so-called higher classes, will patronize them in avoidance of the supposed contamination of the common school.

All these demands will not only keep up this means of supply, but will, to a certain extent and independently of all forced or general legislation, control it. It is therefore the part of wisdom to recognize this inevitable state of affairs, whether it grow out of the wants, or be a portion of the prejudices of our social condition; and, though we may not be able to change it, to see whether we cannot so control it as to bring it within the general scope of our system of education and cause its very narrow-mindedness to promote the good of the whole.

In recognizing the essentiality of the Academies to our State system, we must not, however, shut our eyes to their deficiencies. Nay, in their correction it is that the hope of co-operation is found. Their defects, like the Colleges, mainly spring from the fact that their course of instruction is not regulated according and up to the proper standard. Many of them belittle the academic system by teaching the lower branches, even to the Abecedarian rudiments,—thus also injuring and interfering with the day common school.

And, even within the course of study proper for an Academy, most of them teach unscientifically—unnormally, if we may use the word; most of their Principals not being trained or scientific Teachers at all, but retired clergymen, or members of other professions, who have fallen back on the business of teaching for a livelihood.

And again, some of them undertake to impart instruction in the branches or portions of study properly belonging to the College course; thus overtasking themselves and injuring the higher institutions.

From these causes it mainly arises, that our Academies have neither that distinct place nor that due influence in our State system which they should possess. Nor is this all of the evil; their interference with the College above and the day common school below, being as detrimental to those institutions as it is to themselves.

The remedy is obviously very similar to that proposed in the case of the College, viz: The confinement of all institutions of the Academical class to the branches of study proper to that class,—leaving to the day common school its own work, (where not graded up to the high school) in preparation for the Academy; and to the Academy its proper work, either preparatory to the College or final, as the case may be:—It being always understood that the College will also refrain from trenching on the ground proper of the Academy, by closing its own Preparatory school.

Thus would the Academy, as an essential and sharply defined feature, take its proper place in our great State system; widening the basis of all below, elevating all above and connecting the whole.

2. State appropriations to Academies are neither proper, nor, if those institutions be placed on their own ground, will they be needed.

The writer was at one time instrumental in obtaining State aid to the Academies, on certain conditions. But it was a mistake and soon discontinued. One cause was the fluctuating character of the institutions themselves. Some were incorporated, some were what is called County Academies, and some were mere private institutions; but all were so unpermanent in their condition, owing to their unregulated nature, that they neither formed any reliable basis for State recognition, nor presented a proper claim for public aid. In fact, some of them were only kept in operation to secure the annual grant, and ceased to exist as soon as it was withdrawn. This will probably continue to be the case as to the Acade-

mies, though it cannot as to the Colleges. Tehse all have permanent endowments and distinctive interests that retain them in existence irrespective of State aid, which, though it can be made greatly to improve their usefulness, is not expected ever to become their main reliance.

But if properly regulated, elevated and confined to their own proper sphere, and assured of permanence in that sphere, the Academies would not need State aid. The mass of well prepared pupils thrown into them, not only from the fast improving common school but from the classes in the community already enumerated, together with the influence of the rapidly increasing demand for higher instruction now pervading the whole community, would not only crowd all the existing Academies with students, but necessitate the establishment of many more. From this true and reliable source would flow abundance of funds for their support and for the procurement of all necessary instruction, apparatus and appliances,and thus assure them in their proper position.

It would therefore appear, that all that is required for the perfection of our Academical institutions is confinement to their proper functions, without interference with the other classes of schools. This would vastly increase their value to the State, whose main reliance they have so long been in relation to higher education.

Reading Latin.

"Our Teacher says we must read another book of Virgil," said one of our boys, this morning, at the breakfast table. "Which one are you now in?" asked we." "The fifth," said he; "and we expected to go into Horace or Cicero, at the end of it." "Well," we replied, "it will not only be better for you to read another, but all the other books to the end of the Æneid, if the teacher permit, than to stop where you are. Are not the difficulties of the author decreasing and your interest in the story growing, with every additional book?" He admitted they were; and as he seemed to be convinced of the propriety of his teacher's intention, by the reasons then given, we shall now briefly state them to the reader.

It has always seemed to us, that the common mode of studying—not reading—Latin and Greek, aye, and the modern languages, in the schools, is the one best calculated to deprive it of all interest and the least adapted to make linguists as well as scholars,—men of knowledge in Roman and Grecian affairs and literature, as well as Latin and Greek verbalists—that could be devised.

A boy takes up the grammar; gets a faint idea of the forms and inflections of a few model words, with the, to him, novel facts that adjectives and participles have gender and case, that case is imprinted on the form of the word, and that almost every mood, tense, number and person of a verb is indicated, not by auxiliaries, but by changes in the verb-word itself. Yet while he is groping in this maze of difficulties, and before these interesting novelties are well settled in his mind or the details fastened upon his memory, he is hurried into translation, with all its puzzles of concord and government, of rules and exceptions, of declensions and conjugations, of declinable and indeclinable classes, of genders without reference to sex, and voices which are neither active nor passive. A short time he wanders in this growing darkness; then, in a month or two he finds himself, almost hopelessly, struggling with the idiomatic difficulties of Cæsar's War in Gaul; and next, just as soon as he begins to feel a little comfortable in his work and is perhaps engaged in reconstructing the famous Bridge, with not more than one half of the parts mis-placed, presto! change! he finds himself in the Æneid without halting an hour with Tityrus or even learning the meaning of a Georgic. And thus, as in the case of our own boy, this unthinking desire for haste—not knowledge—urges him on to the difficult niceties of Horace or the professional peculiarities of the forum, in Cicero.

Now this is all wrong; and, as before remarked, if the object were to give a distaste for Latin and prevent the acquisition of the power to read the language with facility and pleasure, there could be no better method invented. It places the mind of the student all the time in a state of toil and difficulty, dealing, day after day, with the mere dictionary meaning of the word and the grammar nature of its inflection; trying to make rude sense out of the one and halting syntax of the other. For, just when this task process—this collecting of straw for the tale of bricks—has ceased, and the poor word-slave has begun to see the end of his toil, he is at once elevated to a higher book and promoted to a harder task; and so on to the end of his Latin course. Not a single classic in the whole list is read to the end. Not one is fully or even half appreciated in its beauty or its information. Not one is sufficiently valued ever to be opened again after leaving School and College.

What is the remedy? Why, simply to cause our boys to read Latin, as they read and with as much facility as they read, English. Does any one question the possibility of this? Of course not only one does, but nearly all do; for they have been so trained as to have imbibed that idea with the very mode of their training. Nevertheless, many wrongs, any more than one wrong, never yet made a right; and the absurdity of the process needs but to be stated, as above, to con-

vince all candid persons, as it did our boy, of the inappropriateness of the procedure.

The remedy is: 1. To found the learner well in the nature and inflections of the language; giving with the etymological changes of the grammar, apt and short phrases and sentences to translate into English, or to make into Latin, in order to exemplify them and fasten them upon his memory.

2. To exercise him, according to his progressively increasing strength for the work, in such a book as Æsop's Fables, Viri Romæ, or some equivalent and easy book; still keeping at the grammar as the main object, and adding the writing of short exercises in making Latin from English, to the ground work of the grammar and the test work of his daily translation.

3. To place in his hand an easier book than Cæsar —perhaps the better and less difficult parts of Ovid or Sallust's Jugurthine War, and let him read it through and become master of its style and contents, so as to read it with facility. Then, may come Cæsar, and Virgil, and Horace, and Cicero, &c. in their order; each read through and thoroughly mastered before the next is attempted. And, our life for it, at the end of the College course,—for this list will run from the beginning to the end of the boy's and the youth's study of the language,—there will be such a mastering of it, as will have added not only a new and a practically useful language to the student's stock, but an amount of knowledge and an improvement in taste, not now met in one in a hundred of college graduates, if in one in a thousand.

Let our Latin Teachers think of this. Let our college authorities discuss the question, whether sounder knowledge of the rudiments of the languages and not the reading of portions of so many books, would not give them better Freshman classes, and broader knowledge in their graduates?

Department of Common Schools.

DEPARTMENT OF COMMON SCHOOLS, }
OFFICIAL.] HARRISBURG, Nov. 1866, }

County Institutes.

Franklin	County,	Greencastle,	November 13,	1866.
Wayne	"	Honesdale,	" 13,	"
Cumberland	"	Mechanicsburg,	" 13,	"
Lancaster	"	Lancaster,	" 13,	"
Mifflin	"	Lewistown,	" 19,	"
Lehigh	"	Catasauqua,	" 29,	"
Westmoreland	"	Greensburg,	December 26,	"

To County Superintendents.

It is hoped that all the Superintendents in the State will so arrange their business as to be present at the convention, in December. It is a part of their official duties to attend meetings called for their mutual benefit. Let each come prepared to secure and impart information that all may be instructed in regard to their duties. Half of the Superintendents are new officers. These need the information that others have acquired by experience.

Arrangements will be made, if possible, for a reduction of fare at the hotels in the city.

Stamp Duties.

By the 9th section of the Internal Revenue Laws of the United States, approved July 19, 1866,

"All official instruments, documents and papers issued by any officer of the United States Government, or by the officers of any State, county, town, or any other municipal corporation, shall be and are hereby exempt from taxation."

By decision of the Commissioner of Internal Revenue upon this law, in reply to inquiries upon the subject presented by this department,—the following instruments, documents and papers used in the administration of the Department of Common Schools by the several officers connected therewith are subject to stamp duties, and no others.

1st. Diplomas or Certificates issued by the State Normal Schools,	$ 05
2nd. Bonds of Collectors of school tax,	1.00
3rd. " Treasurer " District,	1.00
4th. Checks by the District Treasurer on Banks to pay orders on the District Treasury by Board of Directors,	.02
No. 1. Stamps to be paid for by teachers receiving Diplomas or Certificates,	
No. 2. Stamps to be paid for by Collector.	
No. 3. " " " " Treasurer.	
No. 4. " " " " "	

"In any and all cases where an adhesive stamp shall be used for denoting any duty imposed by this Act, except as hereinafter provided, the person using or affixing the same shall write thereupon the initials of his name and the date upon which the same shall be used or attached, so that the same may not again be used.

And if any person shall fradulently make use of an adhesive stamp to denote any duty imposed by this Act, without so effectually cancelling and obliterating such stamp except as before mentioned, he, she or they shall forfeit the sum of fifty dollars."

Questions and Answers.

4. QUESTION: How much school tax can a young man be obliged to pay if he has no taxable property?

ANSWER: Every resident male taxable of the age of twenty-one years whose name is found upon the last adjusted valuation, is to pay one dollar school tax, whether he be valued for an occupation or not, or whether he has taxable property or not. If his occupation be valued at such a sum as will, when multiplied by the rate per cent. produce less than one dollar, he is still to pay one dollar and no more; but if the same when thus multiplied will produce more than one dollar he is to pay whatever the sum thus multiplied produces but not one dollar additional, thus:

A. Bond. No occupation valued. Tax, $1.00
C. Dale. Occupation valued $75, rate .005 on the dollar $75 x .005 = .375. Being under one dollar or the minimum tax, C. Dale pays 1.00
J. Park. Occupation valued $350. x .005 = $1.75
J. Park is to pay 1.75
and no more, unless he has taxable property; if so, the tax on his property must be added to the $1.75.

5. QUESTION: Is there any way to oblige Directors to publish the account of the receipts and expenditures of their respective districts as required by the Act of April 11, 1862, section 18, as found on the 89th page of the School Laws and Decisions?

ANSWER: It appears by the frequency of the receipt of letters containing questions similar to the above, that this duty is very generally neglected by the Directors.

This section of the law is as obligatory upon the Boards of Directors as is the section requiring them to keep open schools, and a neglect to perform this duty according to the law will subject Directors to removal by the Courts, the same as the neglect of any other duty required by law.

6. QUESTION: I have agreed to teach 22 days for a month and not attend district Institutes, there not being any in the district. Can I teach two Saturdays in each month?

ANSWER: The law is as plain upon this subject as the English Language can well make it. The law reads thus: "*No Common School shall be kept open for the purpose of ordinary instruction on any Saturday.*" This law has never been repealed and is therefore as binding upon Directors and teachers as any other law upon our statute books. In districts in which the schools are kept open upon Saturday, the President of the Board of Directors cannot swear, or affirm that the schools "*have been kept open and in operation according to law,*" because it is in direct violation of the plain letter of the law to have them kept open and in operation upon any Saturday. A contract between the Board and teacher in which the Directors agree to allow him to teach upon Saturday and he agrees to thus teach, is not legal and consequently not binding.

Soldiers' Orphan Schools.

GETTYSBURG BATTLE FIELD: During the last month the schools of Paradise and McAllisterville have each transmitted $10, contributed by the pupils, to pay for a share of stock in the Battle-Field Memorial Association. As soon as the other schools shall have acted on the subject, the stock will be subscribed for and the certificates forwarded.

DAYTON SCHOOL: A new school for pupils of the more advanced grade, has been opened at the village of Dayton. It is in the North-eastern part of Armstrong county, near the Indiana line, and will accommodate the counties of Armstrong, Indiana, Jefferson and Clarion. All the pupils, from those counties, who were in the schools at North Sewickley and Philipsburg, in Beaver county, have already been removed to Dayton.

NORTH SEWICKLEY: This school will be closed on the first of December, as a school for orphans of the more advanced grade; and it will then probably be opened as one for younger orphans, similar to those now in operation at Loysville, Jacksonville and Andersonburg.

ORPHANS OF COLORED SOLDIERS: As stated in this *Journal* soon after the opening of the schools, the same provision and relief for the orphans of our colored soldiers who laid down their lives in the common cause, will be made as for those of white troops. But till recently, very few applications of this kind were made; and even now not over a half dozen are on hand, though quite a number are believed to be in progress. To meet this just demand, measures are in progress to establish a school for this class of orphans, which will be, in all respects, similar to those for the white children.

DEAF & DUMB, BLIND, FEEBLE-MINDED AND VICIOUS CHILDREN: Amongst these orphans, as in other collections of children, there are some who are defective in the senses or the intellect, and a few whose moral habits require special treatment. These would all be out of place in the ordinary schools; yet justice demands that they be provided for out of the same fund given by public liberality for the training of the less afflicted orphans. Accordingly, arrangements are now in progress for their reception, at the public expense, into the State institutions proper for their several cases.

The Principals of the different schools and the county committees will, therefore, please make known all cases of destitute soldiers' orphans, who are either Deaf and Dumb, Blind, Feeble-minded or incorrigibly vicious, to the State Superintendent, at their earliest convenience; with an exact statement, which should be prepared by a Physician, of the nature and extent of the affliction in each case; and a certificate, if such be the fact, that the subject of the statement is not a fit inmate for any of the ordinary schools. And as soon as practicable afterwards, such measures will be adopted in each case as may be requisite and proper.

General Principles and Rules

Of the Schools for the More Advanced Classes.

GENERAL PRINCIPLES.

The object of the State in taking charge of the destitute orphans of her dead soldiers, is, to provide for their Education and Maintenance. This is to be done in a manner at once worthy of her and useful to them. In carrying out this intention, it is to be kept in view, that, while education and maintenance are both to be provided in proper degree, the one is subordinate to the other; for inasmuch as the soul is the nobler and more valuable, its wants are to be preferred to those of the body. Neither, however, is to be neglected or stinted.

Education, in its full sense, embraces proper habits of body and development of conscience, as well as instruction of mind. All are indispensable to the formation of right character. All are, therefore, to be provided for and promoted in these schools, to the fullest extent of which their officers and teachers are capable. But, inasmuch as in this complicated process there must be a starting point and a department of instruction to which all the others are to be in a certain sense subsidiary, and inasmuch as the wisdom of the world and the custom of our ancestors have decided the instruction of the mind to be that starting point in the general education of youth,—

I. *The regular Education of these Orphans in the School Room, is hereby recognized as and declared to be, that department in their general instruction which is to have prece-*

dence in, while it is at the same time to be, as far as practicable, promotive of all their other necessary studies, pursuits, exercises, and employments. It is in no wise and at no time to be curtailed or interfered with, either for profit in employment, for the ease of instructors, under pretext of pleasure or exercise for pupils, or for any other cause, except sickness and those periodical intermissions and vacations which are the right of youth.

This rule is to be without exception. And, when it is considered that only five hours work in the school room during five of the seven days in the week, are required of the pupil, and that consequently all the rest of the time is left for physical labor and recreation, for eating, rest and sleep, and for religious instruction, exercises and worship,—it cannot with truth be asserted, that an undue draft is thereby made, either upon the pupil's time, energies or patience, or that the teacher's labor and professional skill are unduly taxed by devoting eight hours to the school room.

The nature of these schools,—in which industrial instruction and employment are to be connected with intellectual, moral and religious training,—renders an additional fundamental principle or rule imperative; and that is,

II. *That every pupil shall have an equal duration and opportunity of school room instruction, with all the others; and that such instruction shall be adapted to his or her intellectual condition and wants.* Therefore, neither is any larger pupil to be detained from the school room for the purposes of labor, when the time for attendance has arrived or during such time, (except in regular turn to which all shall be subject,) nor is any junior pupil to be curtailed in the number or duration of lessons, under pretext of the superior or more pressing wants of the elder. Each is to have the degree of instruction and attention proper for his or her age and state of advancement, and a sufficient force of teachers is to be provided to effect this object.

The rights of children in matters of sleep, rest and play, are as well founded in reason, as those of mental or moral instruction. They cannot be violated without injury as well as injustice. Therefore,

III. *Rising before daylight, in a school or institution for children at least, is neither promotive of health, comfort, study nor economy.* The damp air of the morning and the cheerless rooms of the school before either sun or fire has rendered them pleasant, are as unwholesome as they are comfortless and unpropitious to mental effort. The same candle light wasted in the dark hours of the morning, or rather of the latter part of the night, if properly employed during two or three hours after sunset, will effect much more in the way of study. While the school room is yet warm in winter or begins to be cool in summer, and while the studies of the day are still fresh in the memory and their accompanying instructions recent, as much may be effected in the evening as in double the time during the dark and probably chill morning hours; or, if miscellaneous reading and voluntary improvement be the work of these hours, as they should mainly be, the body, the mind and the spirits will all be in better condition for effort in the latter part of the day, than at any other time. Accordingly, that kind of early rising, which is really getting up and performing or attempting to perform the first duties of the day in the dark, is to be avoided.

IV. *As rest, play and exercise are also rights of childhood, so they are to be not only allowed in due quantities, but so regulated as to promote moral and physical improvement.* It is therefore, the duty of instructors to regulate without improperly restraining the amusements of the pupils, and to see to it that while cheerfulness and relaxation prevail, nothing detrimental to health or good morals is practised.

Soldier's Orphans, like all other children, are subject to evil influences, and will occasionally be guilty of improper conduct. Those influences are, as far as possible, to be corrected and this improper conduct punished. In cases in which no other corrective is found to succeed, corporal punishment is to be administered. But, in order to prevent the abuse of this power,—

V. *Every instance of corporal punishment, whether it be the application of the rod, confinement to the room, or exclusion from meals, shall be entered in a book kept for that purpose, by the Principal of the school, with the name of offender, cause and kind of Punishment, and date. And all corporal Punishments shall be inflicted by the Principal of the school himself, and not by any of the Teachers or other employees.*

General Distribution of Time.

In order to methodise all the operations of the schools and obtain due time for sleep, food, care of the person, study, work, worship and play, the following hours will be observed:

1st. Pupils will rise about 5 o'clock in April, May, June, July, August and September; and about 6 o'clock in October, November, December, January, February and March, except such details in succession as may be required earlier to attend to special duties—such as making fires, cooking, feeding animals, &c. These hours, however, may be varied, according to the month, within the above limits.

2nd. The first 30 minutes after rising shall be devoted to washing the face, neck, teeth and hands, combing the hair, and arranging the clothing, &c., for inspection; the next 15 minutes to inspection of the person and clothing by the proper officer, and the last 15 minutes of the hour before breakfast, to morning worship.

3rd. Breakfast shall be on the table and the pupils called to it at 6 o'clock in the summer half year, and at 7 o'clock in the winter; and the pupils shall be allowed a full half hour for the meal.

4th. The time between breakfast and the opening of school shall be allowed for play the whole year round; except in Haytime and Harvest, when the pupils shall be permitted to aid in the light and pleasant labors of the season, till the regular school hour.

5th. The shool shall open with the calling of the roll, at 15 minutes before 8 o'clock in the morning, and continue till 11¾ o'clock, with 15 minutes of recess at 10 o'clock.

6th. Dinner shall be on the table at 12 o'clock, and the pupils shall have a full half hour at table.

7th. The time between dinner and the opening of school shall be for play, except for such pupils as, in their turn, shall be detailed for special duty.

8th. The school shall re-open at 1 o'clock, p. m., and continue till 4¾ p. m., with a recess of 15 minutes at 3 o'clock.

9th. The first half-hour after close of school shall be devoted to Military Drill by the boys and proper physical exercise by the girls; and the remaining time till supper

to play, except by pupils specially detailed for work, in their regular turn.

10th. Supper shall be served and pupils called to it at 6 o'clock, all the year round, and a half hour allowed for the meal.

11th. The half hour between supper and seven o'clock, shall be for play.

12th. From 7 to 8 o'clock in summer and to 9 o'clock in winter, shall be spent in the main study-hall and under the eye of the Proprietor of the school himself, in exercises of vocal music, declamation, reading essays, writing essays and letters, familiar lectures, miscellaneous reading, &c; an evening or part of an evening in each week, as the Principal shall direct, being devoted to each of these or other similar employments.

13th. After family worship, in the study hall, the pupils shall retire to their rooms at 8 o'clock in summer and 9 o'clock in winter, and all lights in bed rooms shall be extinguished at the end of 15 minutes from those hours respectively.

School-Room Principles and Rules.

In order to interest and aid pupils in their studies without supplanting healthful self-effort, to overcome as far as practicable the obstacles to combining industrial pursuits with intellectual culture, and to secure to each pupil an equal advantage in recitation,—the following will be the fundamental rules of instruction in these schools:—

I. *The Principal Teacher shall not, as a general rule, set a task, or hear a lesson, but shall confine himself to the giving of oral instruction and assistance in the study of the text-books, in the main study hall.*

Every student has, on innumerable occasions, felt the want of an intelligent, kind and learned friend while struggling with the difficulties of a new study or science,—not of one to tell him every thing, but to put him in the way to overcome those difficulties and pass through those dark passages with which every text-book, no matter how good, does more or less abound. Thousands of youth have become disgusted with study and lost their interest in learning, just for want of such aid. And this aid it is, which is indispensable to reconcile the extremes of the ancient mode of instruction which was all oral, with the modern, which is all text-book, and retain the benefits of both, and with them the interest of the pupil in his work. Accordingly, it will be the duty of the Principal Teacher of each of these schools:

1st. To afford to each pupil, in his seat, and while studying his next lesson for recitation, on being requested by signal or otherwise any needed explanation, suggestion, advice or aid, as the case may need; but always so imparted as at the same time to overcome the difficulty, yet to do so in such manner as to cause the pupil to exercise his own faculties as much as possible in the effort.

2nd. To send out the classes for recitation to the Examining Assistants, in the Recitation rooms, in their order, and as far as possible by his oversight and assistance, prepared for successful recitation.

3rd. To have reference, in his instructions, more to the comprehension of the fundamental principles and main facts involved in the lesson, than to mere memorized passages or minute details.

4th. To receive reports daily or at stated periods from the examining assistants, showing not only the condition of each class but of each mind and the advancement of each mind in each class; so as to be enabled to adapt his own oral instruction and assistance to the condition and wants of each.

5th. Occasionally, when the state of the study-hall will permit, or when the Principal of the school can take his place therein, to visit the class-rooms during recitation, in order to know how his Assistants may be discharging their duties and to enable him to afford them needed advice and instruction.

II. *No Text or Lesson-books shall be studied except in school, and during school hours; nor, as a general rule, shall any text-book be allowed in the hands of a pupil, except in the presence of the Teacher.*

If the value of the teacher's presence while the pupil is studying the lesson be admitted, nothing need be added as to the danger or loss of time and interest in study consequent upon his absence. It is therefore taken to be established that all lessons should be studied in reach of such aid. But, in schools whose object is to combine intellectual with industrial training, and therefore in which as large a portion of time as possible is to be secured for the former without interference by the latter, the compact confinement of all study within certain hours and at a certain place, becomes imperative. In fact, it is the indefinite mixture of the one with the other and the leaving of both, to a great extent, to the student's own choice or caprice as to time and place, that have mainly prevented the success of most manual labor institutions. Still, in the use of the text-book, even under all proper restrictions, there are certain conditions to be observed. Amongst these are:—

1st. That few studies shall be pursued at the same time by the same students. One at a time till well mastered would probably make the best scholars in each; but, inasmuch as we are omnivorous in mind as well as stomach, and inasmuch also as school-time life is short, three or four may be pursued simultaneously. What these shall be after the rudimental studies, and their order, must of course be left to the principal teacher of the school, in view of the capacity and state of advancement of each pupil. It is however insisted on, that attention be continued, during the pupil's whole continuance in the schools, to *Spelling*—as the first grace of good writing; to *Reading*—as the best exercise of the voice and a most pleasant social accomplishment; to *Writing*—as the practical branch by which more successes in life are commenced, than by any other; and to a thorough knowledge of the fundamental principles of *Arithmetic*, without which no permanent success in business is often effected. Geography, Grammar, &c., have their places, and should come early in the course. But these should precede them and be continued till the end.

2nd. That topical study is the best. A branch of the subject should be taken up, as a whole, in each lesson and be recited and contemplated by itself. If too long for one recitation, it must be divided into two or more; but when the end is reached in this way, the whole should be reviewed together and regarded as a whole, and also in its relation to the main branch or science.

3rd. That the miscellaneous or general reading of the pupil should be, as far as practicable, made to take the same direction as his school room studies, for the time being. In all these schools there should be libraries; and in selecting books for evening reading, the pupils can readily be induced to prefer those calculated to throw light upon their school room labors.

4th. That Dictionaries, Cyclopedias, Digests and Compends be often and liberally resorted to, in aid of text-book study. These will often save the Teacher labor, afford much light to the pupil, impart to him a habit of reference to authority of great value in after life, and be an aid in the use of text-books, second only, in value to that of the living instructor.

III. *The Class Examiner shall set the tasks and hear the lessons, but not, as a general rule, give instruction.*

There are three acts or processes in the culture of mind: 1st. Study, or self-effort by the mind itself, to acquire knowledge or development by the use of books and the other appointed inanimate means; 2nd. Instruction by the living teacher, in aid of the imperfections and insufficiency of the dead book; and 3rd. Examination by a competent person, to ascertain whether the study of the book and the instruction of the teacher have effected the object in view, in reference to the lesson assigned.

If this be the orderly and correct process, based on the nature of mind, the means employed and the end desired,—then there is neither time nor necessity for teaching in the class room. The business of that department is to ascertain and report the progress effected by the joint action of the two other agencies or processes. And all who have closely watched the proceedings in a recitation room, in which both instruction and examination are attempted, will probably acknowledge that neither is satisfactorily accomplished. A few pupils at the head of the class probably make good recitations; but soon a falling off is perceived, and long before the end of the class is reached, the allotted time has been consumed in an attempt, on the part of the teacher, to make up by his own instructions,—which are forgotten as soon as uttered,—for the neglect or ignorance of the rest. Now, such recitations are a severe but useless tax upon the teacher, at the same time that they injure the pupil by using him to this neglect of study and failure in recitation. The true mode is, neither to attempt to add to the knowledge of the pupil making a good recitation, nor to patch up by useless because not remembered instruction, a bad one. Let the exact state of the class be ascertained, and reported to the Teacher—the Master of Study; and day after day, under the impulse of his aid and supervision, an improvement will be visible.

It may and generally will happen, in the class room of a good examiner, acting on this principle and with classes properly prepared, that time will be left at the end of the recitation for general purposes. Perhaps the best use that can be made of such creditable moments, will be to make some remarks explanatory of the general principles involved in the next lesson, or to present some view of the topic of the last, not found in the book. Such aid is legitimately within the sphere of the class examiner and will be of the greatest value to his pupils.

Amongst the special duties of the class Examiner, it may be stated, that he is

1. To assign short lessons, but to exact perfect recitations.

2. To avoid leading questions, or such as suggest the answer, in cases where he is compelled by the nature of the subject to ask questions.

3. To require all passages for committal to memory, to be literally memorized; and not to permit bungling recitals or the substitution of one word for another;—accurate memorization being of the greatest value in after life, as well as due to the subject of the lesson.

4th. To see that the portions to be comprehended and reproduced but not memorized, are comprehended fully.

5th. To hold the pupil to propriety of language in rendering the substance of a passage or lesson. No mispronunciation of words or ungrammatical sentences are to be allowed to pass without correction and explanation. This is the best mode, after all, of teaching grammar.

6th. To promptly report for promotion to a superior class or degradation to an inferior one, every pupil whose progress or the habitual lack of it, renders the change due to himself or to his classmates.

7th. To send a class-book to the Principal Teacher, with each class when it returns from the Recitation room; in which the Examining teacher shall date and note the subject and extent of the next lesson; and shall also enter the names of such pupils as have failed in recitation.

NUMBER OF PUPILS, TEACHERS AND CLASS-ROOMS.

As each of these schools has or is to have a maximum of 150 pupils, the number of Teachers required will be at least four;—that is, one Principal Teacher, and three Assistants or Class Examiners. Of these, the Principal of course is to be a teacher of large experience and of sufficient scholarship to afford instruction in all the branches of study pursued in the school. The assistants may have less scope of scholarship, but each must be well qualified in the branch or branches committed to his or her class room.

In this corps of teachers—two of whom should be males and two females—one should be capable of giving instruction in military drill and calisthenic exercises; one should be qualified to teach vocal music, and one if practicable, should be able to instruct in the rudiments at least, of linear drawing.

As a general rule, it is recommended that the Principal or proprietor of the school shall not himself be the Principal Teacher. His time and attention will be so much occupied by the general supervision of the establishment and providing for its wants, as to render it inconsistent if not impossible to act also as the Principal Teacher. For this position, the better way will be to secure the services of a competent person who shall devote his whole time to school room duties and the matters connected therewith.

This system will require at least three class-rooms to each school, properly provided with Blackboards, &c.; it being inconsistent with its nature to have any of the lessons recited in the study hall.

Programme of Studies and Details.

In order to enable this programme to be punctually and successfully put into operation, the following rules are to be observed:

1st. That the school be divided into four general Divisions, each consisting of two sub divisions or classes, and these as far practicable of an equal number and grade of pupils.

2nd. That each pupil be furnished with all necessary Books, Slates, Paper, Pen, Ink, Pencils &c.

3rd. That every pupil be in his or her seat at the opening exercises of the school, and also at the close, unless absent at the close on detail for work, in regular turn.

4th. That a full half hour be devoted to each recitation.

Programme—Morning Session.

Op'g Exer's.	1st half hour	2nd.	3rd.	4th.	Recess.	5th.	6th.	7th.
15 min. 7.45–8.	30 min. 8–8.30.	30 min. 8.30–9.	30 min. 9–9.30.	30 min. 9.30–10.	15 min. 10–10.15.	30 min. 10.15–10.45	30 min. 10.45–11.15.	30 min. 11.15–11.45
1 Division.								
A. Class,	Work,	Work,	Work,	Work,	"	Recite, Spell. Read	Writing, Exercise,	Recite. Mental.
B. Class,	Work,	Work,	Work,	Work,		Study, Spell. Read	Recite, S. or R.	Writing. Exercise.
2 Division.								
C. Class,	Recite, Ment. Arith.	Study, Spell.	Recite, Spell.	Writing, Exercise,	"	Work,	Work,	Work,
D. Class,	Study, Ment. Arith.	Recite, Ment.	Writing, Exercise,	Recite, Read.		Work,	Work,	Work,
3 Division.								
E. Class,	Recite, Read.	Study, W. Arith	Recite, W. Arith	Writing, Exercise,	"	Recite, Obj. Less.	Study, Spell.	Recite, Spell.
F. Class.	Study, Read.	Recite, Read.	Writing, Exercise,	Recite, Obj. Less		Study, W. Arith.	Recite. W. Arith.	Study, Spell.
4 Division.								
G. Class,	Recite, Obj. Less.	Study, Read.	Recite, Read.	Writing, Exercise,	"	Recite, Count. Less	Study, Spell.	Recite, Spell.
H. Class,	Study, Read.	Recite, Read.	Writing, Exercise,	Recite. Count. Less		Study, Spell.	Recite. Spell.	Study, Read.

Noon—Recess 75 min. 11.45-1.

Programme—Afternoon Session.

1st. ½ hour.	2nd.	3rd.	4th.	Recess.	5th.	6th.	7th.
30 min. 1–1.30.	30 minutes. 1.30–2.	30 minutes. 2–2.30.	30 minutes. 2.30–3.	15 min. 3–3.15.	30 minutes. 3.15–3.45.	30 min. 3.45–4.15	30 minutes. 4.15.–4.45.
Study, W. Arith.	Recite, W. Arith.	Study, Geo. or Hist.	Recite, Geo. or Hist.	"	Study, Gr. or Comp.	Recite, G. or C.	Study, Spell. or Read.
Recite, Ment. Arith	Study, W. Arith.	Recite, W. Arith.	Study, Geo. or Hist.		Recite, Geo. or Hist.	Study, G. or C.	Recite, Gram. or Comp.
Recite, Read.	Study, Geo. or Hist.	Recite, Geo. or Hist.	Study, W. Arith.	"	Recite, W. Arith.	Study, R. or C.	Recite, Obj. Less. or C.
Study, Geo.	Recite, Geo.	Study, W. Arith.	Recite, W. Arith.		Study, Spell. or C.	Recite, S. or C.	Study, Read.
Work,	Work,	Work,	Work,	"	Study, Ment. or C.	Recite, M. or C.	Study, Read.
Work,	Work,	Work,	Work,		Recite, Spell.	Study, T. or C.	Recite, Tables or Comp.
Study, Read.	Recite, Read.	Study, W. Arith.	Recite, W. Arith.	"	Work,	Work,	Work.
Recite, Obj. Less.	Study, Spell.	Recite, Spell.	Study, Drawing &c.		Work,	Work,	Work.

On Wednesday afternoon the A, D and E classes will write compositions during the first half hour after recess; and the B, C and F classes will have a similar exercise during the second half hour after recess. These compositions will be examined and errors marked by the class examiner the succeeding half hours. The Principal Teacher shall give such aid and instruction, in the preparation of these exercises as will make them pleasant and profitable instead of irksome.

On Friday the A, B and D classes will receive a lesson on objects, at the time allotted for the recitation of Mental Arithmetic. The remaining classes will each have a lesson on objects once a week, on Friday, at the periods designated in the programme. On the other days of the week this period of time is to be devoted to orthographical exercises, reviews of previous lessons, &c.

This Programme of Studies provides for eight hours of exercises in the school room every week-day except Saturday; but inasmuch as each pupil in the school will be detailed for work, in regular turn, during two of those hours and have half an hour of intermissions, there will remain only five hours to each pupil for study and in-

struction,—each recitation being preceded by ample time to prepare the lesson by study, under the supervision and aid which this system contemplates. It is believed that this provision for intellectual training is quite sufficient; and that with proper care, skill and faithfulness on the part of the teachers and industry, patience and obedience on that of the pupils, the schools may soon be made to show results alike creditable to themselves and honorable to the State.

Order, Neatness and Work.

GENERAL PRINCIPLES.

I. Concurrently with the improvement of the mind and the elevation of the moral nature, the comfort, health and and efficiency of the body for the purposes of life, are to be attended to and promoted by all proper means.

II. Comfort and health being dependent, as far as can be effected by human means, on proper food, clothing, cleanliness, air, exercise and relaxation,—these are to be secured not only by a sufficiency of each, but their full enjoyment must be promoted by regular inspection and constant supervision.

III. Labor, being essential to health and happiness, is also to be such a portion of the life of these children, as on the one hand, not to interfere with their intellectual or moral development, while, on the other, it shall be of such kinds as shall fit them for those domestic and social duties which all, no matter of what calling or profession, should be able to discharge for themselves.

IV. This labor is to be performed so as, at the same time to be instructive to the pupils and beneficial to the school, and must therefore always to be executed under proper instruction and supervision. Hence,

V. There must be, in each of the schools, a sufficient force of employees to supervise and direct the pupils in all matters of order, neatness and work.

VI. There will be, in addition to the Principal or proprietor of the school and his wife,—from whose kind and intelligent supervision much is expected,—

A Matron with a male assistant.

A Farmer, who shall also be Gardener and the master of boys' work.

A Nurse.

Two Cooks, one of whom shall bake.

Two Laundresses.

One Chambermaid.

One Eating-room girl.

RULES FOR ORDER, NEATNESS AND WORK.

1.—4.30 A. M., Male attendant arises, makes fires in school-room, recitation rooms and in wash kitchen.

2.—5.45, Bell for pupils to rise.

Male attendants to awaken the boys.

Matrons to awaken the girls.

The chambers aired by lowering upper sashes.

Male attendant assists the boys in washing.

Matron assists the girls in washing.

There are to be at least 20 Basins for each sex, and the washing is to be done in separate apartments, which shall be comfortable and well supplied with water, towels, combs, wash-rags, soap and looking glasses.

The towels shall be changed every day.

Special details to report immediately after washing to cooking department, eating-room and farmer, for such work as is to be done before inspection.

3.—6-25. Bell for Inspection.

6-30. Inspection.

No pupils to be excused from inspection, or roll-call, except those actually required in the kitchen or eating room, or such as may be sick.

The *Principal*, himself, shall inspect, and acquaint himself with the condition of each pupil as to cleanliness of face, neck, ears, hands and head,—proper adjustment and cleanliness of clothing—the condition of hats, boots and shoes.

Pupils with torn garments, or buttons off, shall be directed to report, immediately after breakfast, to the Matron and have the garments replaced; and she shall at once place the defective garments in the hands of the seamstress for repairs.

Pupils not passing inspection in regard to cleanliness of person, shall be immediately referred to the matron, or to the attendant upon the boys, for correction of the neglect or oversight.

No pupil shall be punished who fails to reach the standard required to pass inspection, unless the fault is manifestly and perversely his or her own.

4.—7 o'clock; 6 in the Summer. Bell for Breakfast.

The pupils shall pass in order, to the eating-hall from the school room, or other place of assembly.

The Principal and teachers shall eat at the table with the pupils; and the food for the pupils shall be the same as that for the Principal and teachers.

Pupils only to be excused from appearing at table, by the Principal; and all shall remain till the time for eating has expired, when they shall retire in order, as upon entering; except in special cases, when permission to retire has been granted by the person presiding at the table of the pupils asking to be excused.

A reasonable degree of silence shall be maintained while eating.

The pupils shall be taught to eat decently and observe rules of politeness at the table.

5.—8 o'clock. School being opened, the regular details are to be sent from the school room to work, and not before, and any special details announced.

At the bell for change of details, the pupils at work shall return to school without awaiting the arrival of the relief.

Not less than six girls shall be at any time employed in the sewing-room, and as many more as the force of the school will admit of; but when six will leave a deficiency of female help for the other departments, the aid of boys will be resorted to, in such kinds of work as are suitable for them.

Details for the dormitories, kitchen, eating-room, &c., shall be so made that pupils shall not be employed more than one week in the same special department.

No labor shall be exacted from pupils during the hours set apart for play; or for evening exercises; or after the hour for retiring has arrived.

6 - 11-45. School dismissed for Dinner,—which is to be regulated in the same manner as Breakfast.

1 P. M. School re-assembled.

4-45. School dismissed for the day.

5-30. Supper; to be regulated as Breakfast and Dinner.

7.—8 o'clock. Pupils retire for the night, passing in order to the dormitories, accompanied by the matron and male attendant, to see that they go in an orderly manner to bed.

The matron and attendant shall see that the pupils have a sufficiency of bed clothing for the season, and notify the Principal of deficiencies, that he may supply them.

Two blankets, one comfort and two sheets shall be provided for every two pupils in the winter; and a sufficiency, including two sheets, at other seasons.

The chaff bag shall be made of strong ticking, and well filled with clean chaff, fine cut straw, or corn husks.

The bolsters shall also be made of good ticking and filled with the same material as the bed, or feathers when procurable, andco vered with muslin cases.

Sheets and bolster cases shall be washed every week.

Not more than two pupils shall be allowed to sleep in one bed.

Night stools, covered, shall be near the sleeping apartments, and easy of access to every pupil.

The Principal or teachers, before they retire, shall acquaint themselves with the state of the air in the dormitories, and take all necessary steps to secure a healthful ventilation.

Clothes hooks shall be put in each sleeping apartment, sufficient for all the pupils to hang up their garments.

WEDNESDAY INSPECTION.

On Wednesday, after the opening of the school, the boys of each class in turn, shall report to the Principal or other competent person for a rigid inspection as to personal cleanness, discovery and treatment of cutaneous diseases, and the presence of vermin; and the half hour of each class devoted to recitation on other days shall be employed in this duty.

The girls of the same classes shall report in like manner, to the Principal's wife or matron, for the same purpose.

This inspection is to be made regularly and rigidly, and in addition to the daily inspection, and to the bathing of all the pupils on Saturday. The following is recommended as the order and time for this examination of the classes, according to the programme of school exercises:

C Class from	8	to	8–30	E Class from	10–15	to	10–45
D "	"	8–30	" 9	H "	"	10–45	" 11–15
G "	"	9	" 9–30	A "	"	11–15	" 11–45
F "	"	9–30	" 10	B "	"	1 P.M.	" 1–30

SATURDAY'S OPERATIONS.

The programme of the morning until after breakfast, the same as on other days. After breakfast the Principal shall announce the following details, for the next week:

1. Of girls for making beds and sweeping chambers.
2. " " for scrubbing and general house-work.
3. Of Boys to assist the Farmer.
4. " " to assist in making fires &c.

For Saturday:

5. Of Boys to clean yard and premises.
6. All boys not on other duty, to black or grease their shoes, wash and bathe.

It is expected that all work to be performed on Saturday shall be completed by noon, and every pupil be then clean and neatly clad, for dinner.

The afternoon of Saturday shall be entirely for play and recreation, except that in fine weather, one hour shall be employed by the boys in military, and by the girls in systematic physical exercises.

Food, Clothing and Health.

FOOD.

Wholesome, sufficient and regular food is all that is needed for childhood. Rich dishes and dainties are prejudicial. Of course an occasional treat of this kind will be greatly enjoyed, would do little harm if partaken of in moderation, and is not forbidden.

The following, for the present, are the regulations on this subject: It being understood that a sufficiency for all pupils of at least one of the articles in each of the numbered lists shall be on the table, at the respective meals:

Breakfast: 1. Bread. 2. Butter, sauce or Molasses. 3. Coffee, Tea, Chocolate or Sweet Milk, the latter to be warm or cold at the option of the pupil. 4. One or more of the following articles: Fried mush, fried potatoes, with or without onions, fried bread, fried or boiled eggs, gravy, boiled potatoes with skins, tomato sauce, milk gravy, mackerel or other fish, hash or any other warm meat preparation.

Dinner: 1. Bread. 2. Beef, Pork, Mutton, Veal, Poultry, or other meat. 3. One or more of the following articles: Potatoes, cabbage, parsnips, turnips, carrots, green beans green corn, green peas, hominy, beans, rice, stewed onions, stewed beets, or any other vegetable stewed or boiled, vegetable or other soup, boiled or backed pot-pie, tomato sauce, green apple sauce, salad.

Supper: 1. Bread. 2. Butter or Molasses. 3. Coffee, Tea or Milk. 4. One or more of the following articles: Cold meat, hash, stewed fruit, potatoes, onions, pone or other corn bread, potato soup.

Sunday Dinner to consist of cold Meat, Bread, Cakes, Pies, stewed Fruit, &c. *Fruit* to be given at any meal, when in season and grown on the premises.

CLOTHING.

These children are to be plainly but comfortably clad, and their clothes kept in good repair by the seamstresses, assisted by the female pupils.

Such of the garments as can shall be made at the schools, by the seamstresses with the assistance of the girls; and a reasonable compensation will be allowed to the Proprietor of the school, for his trouble and care in the matter, and for the cutting out and labor by the seamstresses. All the articles worn by the girls, except shoes, stockings, cloaks, and head dresses, and all those of the boys except their parade dresses, winter suits and overcoats, and their shoes, stockings, hats and caps, will be made in the schools.

The uniform of the boys shall consist of a dark-blue jacket with black braid and gilt eagle button; dark-gray pants with black braid; and a blue cloth cap with a strip of gold lace.

The other garments of the boys shall be such as the season requires, but as nearly uniform as may be.

The girls shall wear black cloth cloaks and bonnets in winter, with dresses of color similar to each other in the same school; and garments suitable to the season, at other times.

There shall be a room sufficently large, and with conveniences for the orderly keeping of every pupil's wardrobe.

Every garment shall be marked with the pupil's name, or proper number, and shall not be given to another until permanently so assigned.

The matron shall have charge of and shall make herself acquainted with the number and condition of the articles in each pupil's wardrobe; she shall receive from the laundry the clothes of the pupils; and shall see that they are put in their proper places, ready for distribution.

She shall, with her own hands, distribute the garments to the pupils, when necessary for a change.

Every pupil shall be furnished with clean undergarments every week.

Clothes hooks shall be provided at a convenient place, to enable the pupils to hang their hats and hoods upon during school hours. No torn garments shall be placed in the wardrobe.

INSPECTION OF NEW PUPILS AND CARE OF SICK.

No orphan is to be excluded from the school on account of any degree of destitution, or of any disease merely temporary and not in itself dangerous. The opposite cours-

would defeat the very purpose of the institutions, which are for the improvement of the physical condition, as well as intellect. Still, due means are to be adopted to prevent the spread of any contagious disease or other unpleasant condition in the school, from a new pupil thus afflicted.

So in case of sickness of pupils while members of the school,—the duty of providing for their wants and cure is even more incumbent than that of promoting their comfort in health. Accordingly,

1. Two infirmary rooms shall be set apart in each school, one for the boys and the other for the girls; and each shall be provided with the furniture and appliances necessary.

2. A Nurse shall be employed to take charge of all new pupils and keep them apart from the others, till examined by the Physician and pronounced free from all cutaneous and other contagious diseases; and also to have the care of all sick pupils.

3. It shall be her duty to attend upon all diseased pupils, and administer to them such medicines and remedies as shall be prescribed by the Physician; and also to see that their rooms are kept well ventilated and clean and their garments often changed; and that the inmates have such food as their cases may require.

4. No pupil, either newly arrived or previously in the school, shall be discharged from the infirmary till so directed by the Physician.

Religious Instruction and Worship.

GENERAL PRINCIPLES.

I. It is the right of these orphans as it is of every child, separated from home training, to receive, and it is the duty of the teacher to impart, regular instruction in the principles of Religion, as an indispensable element in a proper Education. And, in this State in which Christianity is a part of the law of the land,—the laws themselves being based upon and conformed to its principles,—the Christian religion is to be made a part of the course of instruction.

By this it is not meant merely that these children are to be taught those great principles of morality which are found to conform to the Christian system; but that the Christian system itself, as found in the Scriptures, is to be taught, accompanied with a knowledge of the origin of that system and due reverence for its Divine Author.

II. As there is no religious belief or observance without preference for some one or other of the creeds and forms of worship prevailing amongst the various Christian sects,—that creed is to be taught and that form of worship preferred for each of these orphans, as far as practicable, which the father himself would have designated were he alive, or which the mother in his stead shall indicate.

This principle cannot, from the nature of the case, be fully observed in every instance. For, though the schools have been placed in charge of religious men and care has been taken to have all the prominent sects represented in the corps of Principals,—yet, as the institutions are so scattered over the whole State that in most cases it would remove the child too far from the mother to send it to a school of its own denomination,—Sectarian religious training must therefore be mainly provided for otherwise; Therefore—

III. The assistance of the Christian clergy, resident in the vicinity, is relied on, in this part of the training of the children of their respective denominations, in the schools.

To effect this object, a list of the orphans whose parents were of his church, is sent to each clergyman, with a request that, subject to the rules of the school, he will supervise and guide their religious training, and, as far as convenient, have them attend public worship at his church. But, as there are several schools having no churches or clergy of some of the denominations near them, this renders it unavoidable, that—

IV. In all cases in which there is neither clergyman nor church of the parent's denomination near the school, the orphan thus circumstanced shall, for the time, attend the church of the Principal, and be instructed in religious matters with the body of the school;—due respect being always had to the known religious preference of the deceased father and no attempts made to proselyte his child.

No other expedient than this is generally practicable in such cases. It is true that there may be, in the variety of teachers in a school, some one agreeing with pupils thus removed from church privileges of their own denomination. These, of course, may and ought to take charge of such pupils, as catechumens of their own church; but in the absence of such instruction, this class of pupils are to accompany the Principal.

RULES FOR RELIGIOUS WORSHIP AND INSTRUCTION.

1. There shall be morning and evening worship and grace before meat daily, at the times specified; the worship to be in the study-hall and conducted by the Principal, or such of the teachers as he shall designate, and to consist at the least, of the reading of a portion of scripture, sing ing and prayer.

2. All the pupils of the same denomination shall attend Sabbath morning, afternoon or evening worship as the Principal shall direct, in the church to which their parents belong, if there be one within convenient distance; *Provided*, that the minister or others furnish them with seats and have an oversight of them while in attendance. But no pupils of these schools are to attend night meetings in any church.

3. Each clergyman resident in the vicinity of such school shall have the privilege of visiting and instructing the children of his own denomination therein, as often and at such hours, either on the Sabbath or a week day, as shall not materially interfere with their studies and other pursuits and as shall be agreed to by the Principal: *Provided*, that if there be two churches of the same denomination, the orphans of that denomination shall attend and be instructed by the minister of the nearest, if there be any question.

4. That there shall be a Sunday-School organized in each school; the teachers of which Sunday-School shall be thd teachers of the orphan school and such others from amongst the resident citizens as shall be willing and qualified to assist, with the consent of the principal. And that in the formation of the classes, if there be teachers of different denominations, they shall be put in charge of classes of their own denominations respectively.

5. That the habit of reading the Scriptures be encouraged, not only by the example of the teachers but by affording such historical, geographical and other aids, and by such explanations of the customs and practices alluded to in many of its parts, as shall render its study interesting and the knowledge of it more complete.

6. That the practice of individual prayer by the pupils on retiring to bed at night and arising in the morning is to be encouraged, without being forced.

7. That all the pupils be taught to sing psalms and hymns, and encouraged to join in this delightful portion of public worship on all suitable occasions.

8. That no undue means be resorted to to get up any religious excitement in the schools, or to effect an ill considered profession of conversion:—This momentous step in the life of each individual being better left to the times and the influences of the Divine Spirit, which will not be withheld from faithful and prayerful instruction.

SUNDAY OBSERVANCES.

The time of rising, inspection, worship and breakfast as upon other days.

Immediately after breakfast, the pupils shall put on their Sunday dress.

At 9 o'clock A. M. they will meet for exchange of library books; and each shall be charged with the books issued and be held responsible for their proper care and return.

At 10 o'clock the school shall be called for Sunday School exercises.

When the pupils go to public worship in the morning, the Sabbath School will be held at 1–30 in the afternoon.

Sabbath School will open with roll-call, singing, reading the Scriptures and prayer.

Addresses and general exercises on the Sabbath shall be before the whole school.

For class instruction, the school shall be divided in four, or more divisions.

The duration of the exercises should not be less than one and a half hours; and three quarters of an hour should be spent in class instruction.

Every child who can read with sufficient readiness should be supplied with a copy of the Scripture and receive class instruction. All who cannot read with readiness are to receive oral instruction in Biblical truths and have exercises in singing, &c.

There shall be a sufficient number of hymn books for the pupils.

The school shall be well supplied with maps, charts, cards and works illustrating biblical history and important events.

The class instruction should be topical and the same in all the classes; and it should also be the subject for review and comment during the Sabbath evening exercises.

CORRESPONDENCE WITH HOME.

The manifest design of the State, in the establishment of these schools is not to destroy the home feeling, but to act as a father to the fatherless. Correspondence with the mother and other relatives is therefore a right of each of these orphans; and it is to be as frequent as may be consistent with other duties and not to be in any way restrained except for abuse. Therefore,

Each pupil is to be permitted to write home at least once a month, if so desired by him or herself. Neither the letters sent nor received are to be subject to examination by the Principal or any other authority in the school, except after ascertained violation of truth by the pupil, in former letters sent, or disturbing sentiments in letters received.

In such cases, but no other, the right of unrestricted correspondence shall be forfeited and that of examining letters exercised; but all such cases shall be reported to the State Superintendent, or one of his officers, at the next visit.

VISITS OF MOTHERS.

Frequent visits of parents to their children while at boarding school, are not desirable, in any case. These schools are no exemption from the disturbing practice. Therefore,

1. Mothers are not to visit the schools oftener than once in each quarter of a year, and not to prolong their visits beyond one day; except in cases of sickness, when the visits may be of such frequency and duration as shall be necessary.

2. A Mothers' Room shall be provided in each school, and comfortably furnished with two beds, &c.

3. Mothers shall eat at the table with the pupils, and shall not be charged anything for their accommodations, unless their stay be prolonged without such reason as that of sickness, &c.

VACATIONS.

There shall be one vacation annually in all the schools of this grade, from the last Friday in July till the end of five weeks from the following Tuesday. During this time all studies and labor shall cease in the schools, except the work necessary to carry on the domestic operations.

During, but not to exceed this period, leaves of absence to visit relatives may be granted by the Principal, to such pupils as shall have deserved it, and have a comfortable and proper home to visit.

The other minute details in these schools cannot be here specified. They are left to the experience and judgment of the several Principals and their assistants and may be modified as circumstances shall require. But the main features of the system as herein set forth, will be insisted on, and any departure, reported either by the Examiner or the Inspector of the schools, will, if not at once corrected, be held as a sufficient ground for closing the institution in which such violations of rule may occur.

THO. H. BURROWES,
LANCASTER, *Oct.* 13, 1866. *Supt. Sold. Orphans.*

Original Communications.

Female Education.

MR. EDITOR: In a former brief notice of the incidents attending the establishment of public schools in this State and their progress, it was intimated that there were developments of interest that might, in future, receive a passing sketch. It not only appears that through this instrumentality, education has become much more generally diffused among the rising generation,—but a greater degree of thoroughness and practicality is everywhere seen in the efforts of teachers. One feature of this advancement deserves particular consideration, viz: The position that has been fairly earned by female teachers in our public schools! The increased and rapidly increasing number of the sex employed therein, and with marked acceptance, has been a theme of gratulation among liberal educators, in this as well as in

other States. The fact of the enlarged number of female teachers has several times been commented upon by the heads of our School Department, and by the Editor of the *Pennsylvania School Journal.* In all these notices, if I mistake not, it has been observed, that where there has been a change in any school districts of the relative number of male and female teachers, in favor of the latter, there has been a *perceptible advancement in the character of the schools of such districts!*

It had been long observed, that such results ought to be expected and were uniformly found in *primary schools*,—and observation has shown that in advanced institutions where Philosophy, the Higher Mathematics and the languages are taught, very successful instruction has been given by female teachers. Several Seminaries, organized on the Union principle in this and adjoining States and also several select schools, have been visited in which these results were apparent.

In our own State it is believed, that at the present time a very large majority of the teachers are of the female sex, and a visit to any of the Normal Schools will show a large proportion of this class of teachers.

Among the gratifying reports received from Institutes in our different counties, a full share of the Class Drills, Essays and other performances are conducted by young women—and with what ability is known to all.

The employment of such a large proportion of young women in our public schools, it is thought, has been attended with one incidental disadvantage. The custom of awarding to them a less compensation for other employments, has tended to keep down the salaries of female teachers, and even in cases when their duties and responsibilities have been equally onerous with those of the other sex, their compensation has been much below what they have received—often little more than half! This is unjust and illiberal; for where the amount of service rendered, together with the responsibility incurred, is the same, it is believed that no distinction should be made in the wages. In most districts in the country, the disparity to which I have alluded, is not so great, but in all our large cities and in the most celebrated of our public schools, the compensation of the principals of male and female schools exhibits a shameful inequality!

But this important subject, with others connected with the elevation of the sex, is exciting attention in various parts of the world, and, as it is notorious that our lady teachers have to pay an equal amount for their normal instruction, it is believed that a sense of justice will ere long dictate a more liberal course in regard to their remuneration.

I remarked, that the attention of liberal and gifted minds has been directed to the improved education of females in different parts of our globe.

I transcribe, with pleasure from "*The Nation*" some account of female education, and of the efforts of a gifted lady now devoting her time and talents to the elevation of her sex in that long mis-governed country, *Italy!*

Female Education in Italy.

"We desire the education of the women of Italy, in order that, by their care, men may be trained worthily to bear the name of Italians." Thus wrote, a quarter of a century ago, that most patriotic author, Pietro Giondani, at a period when there prevailed in enslaved Italy, an emasculated system of education, and methods of instruction which, instead of forming commanding intellects suited to the wants of the nation,—conscientious just and honorable leaders, to instruct and guide the masses,—aimed to fill the schools with pedants and captious disputants, and to produce contentious, obstinate, jealous, and therefore weak or profligate men.

If we would make a people great and free, we must above all, promote the education of its women; and if we would educate the Italian people, we must begin by training the future mothers of the nation. The more solid and comprehensive the education of our women, the broader and more fruitful will be the results of our national emancipation. The political question once resolved, Italy ought to apply her whole strength to the solution of the social question, among the first elements of which is the intellectual and moral regeneration of women.

Among the Italian teachers who are laboring for this end with intelligent and affectionate zeal, we are happy in being able to count a lady, who, by the importance of her writings, the solidity of her attainments, and the elevation of her life, is now universally admitted to have acquired the right of being placed at the head of the movement for that regeneration. Not to speak of her works on the general rights and position of women, which have been noticed with great praise by the Italian and foreign press, Anna Maria Mozzoni has recently published an essay, small in volume, but pregnant with instruction, under the modest title of *A Step Forward in Female Culture.*

The moral and intellectual education of woman, is indisputably one of the most deeply felt and universally acknowledged wants of our age. Logical minds perceive that this is one of the most important corrollaries of that equality which philosophy teaches, and a necessary consequence of the revolution which civil society has everywhere accepted, and which has impressed upon all social, political, and religious institutions a rapid transformation.

Upon these principles our distinguished authoress erects the whole structure of her educational system. Nor does she confine that system to the women of Italy, but applies it to the female sex in all nations which have attained a certain point in civilization. She justly observes, that in all countries, the condition of woman is substantially the same, or at least analogous. Everywhere woman is humiliated by legal institutions, hampered by custom and public opinion. Social

statistics are largely made up of much that is denied to her, the little she has to lose. If she enjoys a condition of well-being, she owes her happiness to the individual; while the evil that she suffers is due both to the individual and the institutions. It has, therefore, seemed to her absurd to propose an improvement in the intellectual condition of her sex, which should be limited to the special case of the women of Italy. The base on which her thesis is constructed, being the democratic idea, which cannot logically exclude a single human creature from its share of rights and duties,—she could not confine to a single nationality, a single country, the beneficent effects of progress, without greatly diminishing the value of the scheme and falling into inconsistencies.

We applaud the plan of an international institution in which young women should be educated according to the principles of that universal morality whose precepts command the suffrages of all nations, it being the supreme end and aim of this plan, to redeem woman from the capricious dominion of individuals, by raising her reason and her conscience to the knowledge of her duties of her rights and of the mission imposed upon her, towards herself as an intelligent and progressive being, as an associate in civil society, as a citizen of the commonwealth, as a co-worker in the social laboratory, towards her family as a wife and a mother,—*in which last point alone her situation is distinguished from that of her companion.*

In approving this noble scheme, we may express, the hope that as Switzerland has, at Geneva, her international institute for male youths, Italy may soon possess an international institute for females on her favored soil, where the human heart is still the same which beat in the bosoms of the sons of Latin mothers, and which now pulsates with the fresh life inspired by the hope of the regeneration of the Italian people.

HUMANITAS.

Work for Institutes.—No 20.

AN ARCH IN THE BRIDGE OVER THE GULF.

AN OBJECT LESSON.

Why didn't somebody teach me the constellations, too, and make me at home in the starry heavens, which are always over head, and which I don't above half know to this day?—THOMAS CARLYLE.

It is related as a distinguishing merit of the philosophy of Socrates, that he brought science from the clouds and rendered it familiar to the minds of his disciples:—and, perhaps the same test may be justly applied to all effective teaching in the school-room. Does the teacher desire to impress upon a class some general views in the science of Astronomy? He may with advantage, sieze upon the contemplated appearance of some celestial phenomenon, (as a lunar or solar eclipse)—and, with the aid of such philosophical apparatus as his school may afford, he can exhibit to his pupils in a familiar way the causes of such appearances; and should he be furnished with a Magic Lantern, the whole modus operandi of the phenomenon may be delineated on a surface with such attractive features, as to impart fresh zeal and energy in the pursuit of the science. Suppose, again, that it is desired to inspire his pupils with an interest in the study of the starry heavens: he might inform them, as a preliminary to the efficient pursuit of this branch of Astronomical science, that an acquaintance with the use of a celestial globe is an important preparation; and that the ability to trace the various constellations (as presented on the globe) to their true positions in the heavens, constitutes that very desirable knowledge of the stars to which Carlyle has borne testimony. The simplicity of many problems on the Globe is such, that any bright scholar of 10 or 12 years may readily comprehend most of them. Let the teacher inform his class who wish to understand the management of such a globe, that, in a few hours some star-light night, he could give them sufficient knowledge of all the elementary problems, to enable them, by themselves, to trace the position of any star in the firmament, at the period of observation. Of course there will be a number anxious to possess the knowledge that can be so cheaply acquired. By agreement the first clear evening is selected, when there is no moonlight to interfere; and the teacher, accompanied by his class, bearing with them a globe, are wending their way to some grassy hillock, sufficiently elevated to allow an open horizen on all sides.

The first care is to adjust the globe (one of 16 or 18 inches diameter should be preferred;) and, as a preliminary movement, the *North Star* having been recognized, place the north end of the globe to correspond, so that the brass meridian may pass through the said star, and form a meridian line. Next, elevate the globe to the number of degrees required by the place of observation. Again, find the *sun's place* in the Ecliptic, which will be indicated by the day of the month, (the months, with the number of days in each, being delineated thereon—and a space on each side of it, equal to the latitude of the places north and south in their most extended declinations.) We are now ready for the last adjustment, which consists in bringing the sun's place to the meridian, and setting the *hour index* which revolves around the North Pole, exactly at 12 o'clock. Then turn the globe to the *west* till the index points to the hour of night, in which the observations are about being made,—and it will represent truly the aspect of the heavens.

As a beginning of this lesson it may be well to observe that there are a few stars which are known to nearly all, and which, either separate or combined with other members of their respective constellations, compose the A, B, C of this branch of Astronomy. I will just refer to the

Pole Star—the Pointers of the Great Bear—the constellation of Orion—and Sirius, the most prominent star in the cluster, known as the Dog. A very few evenings spent in thus comparing the relative positions of the Fixed Stars, and reading their names on the globe, where they will be found delineated, will enable a person to identify a considerable number of constellations—in fact, all those of chief interest; and by extending the observations to different seasons (say one evening in a month,) we need require nothing more than the circuit of the months for ability to name nearly all the stars visible in the view of a northern firmament.

To show the elements of interest in this species of knowledge, it is requisite only to appeal to any intelligent traveler who has taken a lonely walk or ride (and who has not?) on a star-light evening! The unsurpassed sublimity and beauty of such scenes, to all true lovers of nature, need not be told—even when there is no index by which the stars may be individually identified. How much more when their names and relative positions are all familiar to the mind! Then we recognize them as old friends and companions, starting up on every hand to cheer and gladden our lonely pilgrimage!

But it sometimes happens that there are collateral incidents which add greatly to the interest intrinsically belonging to these observations. One of these is about to occur in just one month from this date. *The 13th of November is about the period* when we shall probably be visited by meteoric phenomena that will intensify the interest of star-gazing. It is well known that at periodical intervals *Meteoric Showers* are exhibited which, on clear evenings, surpass in grandeur almost any appearances of the heavens that have been witnessed at the other seasons. Soon after dark the common sight of shooting stars begins to arrest the attention. This appearance, always magnificent in itself, is rendered most remarkable at this season of the year, by the accumulation of such a mass of meteoric vapor as to render the *phenomenon* (called "shooting stars") not only a common, but an almost momentary one, through the whole night! It has been remarked by some who have given much time to meteoric observations, and kept registers of the same, that these *periodic showers*, display the greatest splendor at intervals of about 13 years, and it is believed this fact has been sustained by many and repeated observations. Many circumstances may, however occur to render the appearance, not only less brilliant, but even to prevent it entirely. For instance, on a bright moon-light night comparatively little will be seen of the meteors, or, on a cloudy night, nothing at all!

Thirty-six years ago, on the 13th of next November, business called me from home, to a distance of about 10 miles. My companion and self set out on horse-back for home, some two hours before day, and the ride I shall never forget! From the period of starting till broad day-light the *shower* was kept constantly in view. I was soon informed that it was only a specimen of what had been seen in full splendor during the whole night! The phenomenon was an entire novelty to me at the time, but the wonderful curiosities witnessed were soon chronicled all over the continent. One in particular manifested his enthusiam by selecting a suitable location, where extended on his back, with suitable covering, he traced the origin and progress of the different meteors, and afterwards gave to the world his series of observations in a valuable periodical embracing Philosophical Transactions.

NEWTOWN, *October 13th* 1866. HUMANITAS.

Three Grades—A Suggestion.

MR. EDITOR: There are a great many inferior teachers employed in our county, as is, no doubt necessarily, the case in every county. Some of our good schools have poor teachers, but it is not likely that the standard will be kept up long under poor management. This state of affairs is brought about by a young man, who is not fully qualified, going to a relative, who is a school director, and making application for a certain school under his local control. The director not wishing to provoke the displeasure of his own kin, promises to accede to the applicant's request, provided he can procure a certificate. Whereupon the would-be teacher goes to some examination where the Superintendent may not be very rigid, because of the class of teachers required, and there he procures the needed certificate, which, by the conditions, secures him the school but *not* the necessary qualifications.

Again, the examinations held by County Superintendents are about the same for teachers that take charge of four-month schools, as for those that have the charge of ten-month schools. It is not reasonable to suppose that a person would qualify himself to stand an examination for a ten-month school, and then accept one for four months, which would compel him to follow something else the remaining eight months.

The following plan would, I think, improve this state of affairs. Let the schools be divided into three classes, namely: first class,—those which remain open from eight to ten months; second class,—those that remain open from six to seven months; and third class,—those which are in session from four to five months. Let a candidate for any of the first-class schools be required to produce a certificate averaging, at the least, one

and a quarter ($1\frac{1}{4}$); let a candidate for a second class school be required to get a certificate averaging at least one and three quarters ($1\frac{3}{4}$): and an applicant for a school of the third class, a certificate whose average will not fall below two and a half ($2\frac{1}{2}$).

To carry out some such plan, the examinations need not be varied much; and relatives and others will thus be furnished a very convenient excuse, if the applicant's certificate does not reach the required average. Also, the short-term teachers will have justice done them and the directors who think a short term enough will enjoy the satisfaction of having third-rate schools.

MONTGOMERY, *Sept.*, 1866. U. P.

Normal Teachers.

MR. EDITOR: Your eminently wise and well-timed editorial on Normal Schools in the July number of the *Journal*, was read with great interest. *You* struck at the cause, *we* have felt the effects of that cause.

The logical effect of training under the class of Professors you speak of, is to raise up a body of narrow-minded teachers, who are apt to think that wisdom was born and is destined to die with them, or with the institution in which they were educated; that the only text-books fit for use are those adopted in the Normal Schools; that every formula for the solution of mathematical problems is worthless unless it has received the approval of the Normal Professors; that every method of analysis not in use in the Normal School is, necessarily, defective; and that those who do not see through their spectacles are in outer darkness.

I speak of what I have seen;—and had I the time, would give you a little bit of history corroborative of what I have said. One thing I may add;—that on account of this clannish conduct, our Board, at one time, looked with suspicion upon every Normal graduate, and refused to elect other applicants of the same class, from an experience of this kind and from a fear that others would be likely to exert the same influence over their teachers,—ranging them against just regulations and the authority of the Board.

But enough of this—I intended when I commenced, only to thank you in the name of the good cause for the signal service you have done in that article. Z.

A Sin of Omission.

A System of Geography, Physical, Political and Descriptive; accompanied by a new Atlas of forty-four copper plate maps, and illustrated by two hundred engravings, by S. Augustus Mitchell, Philadelphia; published by E. H. Butler & Co.

This treatise professes to be an entirely new book, and in style and mechanical execution, reflects credit on the publishers, but we are sorry to say we do not think it reflects much credit on its author. Every text-book for schools should present the subject of which it treats, systematically, clearly, and truthfully, however limited the design of the author. It should also present the latest facts in the advancement of the science. The book before us, is the fourth of a series by the same author,—is designed for advanced classes in our schools,—and should therefore give a pretty full and accurate account of the social, political and statistical condition of the world, but more especially of our own country.

In the preface the author says, "The political features are described, including the population as to race and descent, as well as to numbers; the manners and customs of the people, &c., and occasionally, important historical statements." How faithfully he has fulfilled his promise with reference to the United States we will briefly show without taking the trouble to examine it in reference to other countries. The book was issued soon after the close of the Slaveholders' Rebellion, which, for magnitude, and for its political and social consequences, has no parallel in the history of the world, and we think a brief account of this civil war quite essential to a comprehension of the political and social condition of the United States; yet *not a sentence can be found which would suggest to the school boy, that such a war as that of the Great Rebellion ever occurred in this country!*

We are told, on page 88, that by the census of 1860, about one-seventh of the population of the United States were blacks, of whom about 4,000,000 were slaves; but what has become of these slaves and free blacks, no one can tell by reading this book. No mention is further made of them, unless we are to infer that they have undergone a *bleaching* process, and changed into Englishmen, Frenchmen, or some other European or Asiatic race. This idea would seem to receive confirmation from the statement respecting the population of South Carolina, namely, "The population, principally of *English and French* descent, numbers 704,000." According to the census of 1860, about two-thirds of the population of South Carolina were of African descent, about 402,400, slaves, 9,914 free colored, and 291,388 whites. The statement should be "The population, principally of *African* descent, numbers 704,000." The same want of accuracy is manifested in other cases. But let this suffice. We deem the book in its present state, unworthy the patronage of both North and South, and it should be excluded from every school, till the author sees proper to revise its historical features and correct its statistical blunders. P.

Pole Star—the Pointers of the Great Bear—the constellation of Orion—and Sirius, the most prominent star in the cluster, known as the Dog. A very few evenings spent in thus comparing the relative positions of the Fixed Stars, and reading their names on the globe, where they will be found delineated, will enable a person to identify a considerable number of constellations—in fact, all those of chief interest; and by extending the observations to different seasons (say one evening in a month,) we need require nothing more than the circuit of the months for ability to name nearly all the stars visible in the view of a northern firmament.

To show the elements of interest in this species of knowledge, it is requisite only to appeal to any intelligent traveler who has taken a lonely walk or ride (and who has not?) on a star-light evening! The unsurpassed sublimity and beauty of such scenes, to all true lovers of nature, need not be told—even when there is no index by which the stars may be individually identified. How much more when their names and relative positions are all familiar to the mind! Then we recognize them as old friends and companions, starting up on every hand to cheer and gladden our lonely pilgrimage!

But it sometimes happens that there are collateral incidents which add greatly to the interest intrinsically belonging to these observations. One of these is about to occur in just one month from this date. *The 13th of November is about the period* when we shall probably be visited by meteoric phenomena that will intensify the interest of star-gazing. It is well known that at periodical intervals *Meteoric Showers* are exhibited which, on clear evenings, surpass in grandeur almost any appearances of the heavens that have been witnessed at the other seasons. Soon after dark the common sight of shooting stars begins to arrest the attention. This appearance, always magnificent in itself, is rendered most remarkable at this season of the year, by the accumulation of such a mass of meteoric vapor as to render the *phenomenon* (called "shooting stars") not only a common, but an almost momentary one, through the whole night! It has been remarked by some who have given much time to meteoric observations, and kept registers of the same, that these *periodic showers*, display the greatest splendor at intervals of about 13 years, and it is believed this fact has been sustained by many and repeated observations. Many circumstances may, however occur to render the appearance, not only less brilliant, but even to prevent it entirely. For instance, on a bright moon-light night comparatively little will be seen of the meteors, or, on a cloudy night, nothing at all!

Thirty-six years ago, on the 13th of next November, business called me from home, to a distance of about 10 miles. My companion and self set out on horse-back for home, some two hours before day, and the ride I shall never forget! From the period of starting till broad day-light the *shower* was kept constantly in view. I was soon informed that it was only a specimen of what had been seen in full splendor during the whole night! The phenomenon was an entire novelty to me at the time, but the wonderful curiosities witnessed were soon chronicled all over the continent. One in particular manifested his enthusiam by selecting a suitable location, where extended on his back, with suitable covering, he traced the origin and progress of the different meteors, and afterwards gave to the world his series of observations in a valuable periodical embracing Philosophical Transactions.

NEWTOWN, *October 13th* 1866. HUMANITAS.

Three Grades—A Suggestion.

MR. EDITOR: There are a great many inferior teachers employed in our county, as is, no doubt necessarily, the case in every county. Some of our good schools have poor teachers, but it is not likely that the standard will be kept up long under poor management. This state of affairs is brought about by a young man, who is not fully qualified, going to a relative, who is a school director, and making application for a certain school under his local control. The director not wishing to provoke the displeasure of his own kin, promises to accede to the applicant's request, provided he can procure a certificate. Whereupon the would-be teacher goes to some examination where the Superintendent may not be very rigid, because of the class of teachers required, and there he procures the needed certificate, which, by the conditions, secures him the school but *not* the necessary qualifications.

Again, the examinations held by County Superintendents are about the same for teachers that take charge of four-month schools, as for those that have the charge of ten-month schools. It is not reasonable to suppose that a person would qualify himself to stand an examination for a ten-month school, and then accept one for four months, which would compel him to follow something else the remaining eight months.

The following plan would, I think, improve this state of affairs. Let the schools be divided into three classes, namely: first class,—those which remain open from eight to ten months; second class,—those that remain open from six to seven months; and third class,—those which are in session from four to five months. Let a candidate for any of the first-class schools be required to produce a certificate averaging, at the least, one

and a quarter (1¼); let a candidate for a second class school be required to get a certificate averaging at least one and three quarters (1¾): and an applicant for a school of the third class, a certificate whose average will not fall below two and a half (2½).

To carry out some such plan, the examinations need not be varied much; and relatives and others will thus be furnished a very convenient excuse, if the applicant's certificate does not reach the required average. Also, the short-term teachers will have justice done them and the directors who think a short term enough will enjoy the satisfaction of having third-rate schools.

MONTGOMERY, *Sept.*, 1866. U. P.

Normal Teachers.

MR. EDITOR: Your eminently wise and well-timed editorial on Normal Schools in the July number of the *Journal*, was read with great interest. *You* struck at the cause, *we* have felt the effects of that cause.

The logical effect of training under the class of Professors you speak of, is to raise up a body of narrow-minded teachers, who are apt to think that wisdom was born and is destined to die with them, or with the institution in which they were educated; that the only text-books fit for use are those adopted in the Normal Schools; that every formula for the solution of mathematical problems is worthless unless it has received the approval of the Normal Professors; that every method of analysis not in use in the Normal School is, necessarily, defective; and that those who do not see through their spectacles are in outer darkness.

I speak of what I have seen;—and had I the time, would give you a little bit of history corroborative of what I have said. One thing I may add;—that on account of this clannish conduct, our Board, at one time, looked with suspicion upon every Normal graduate, and refused to elect other applicants of the same class, from an experience of this kind and from a fear that others would be likely to exert the same influence over their teachers,—ranging them against just regulations and the authority of the Board.

But enough of this—I intended when I commenced, only to thank you in the name of the good cause for the signal service you have done in that article. Z.

A Sin of Omission.

A System of Geography, Physical, Political and Descriptive; accompanied by a new Atlas of forty-four copper plate maps, and illustrated by two hundred engravings, by S. Augustus Mitchell, Philadelphia; published by E. H. Butler & Co.

This treatise professes to be an entirely new book, and in style and mechanical execution, reflects credit on the publishers, but we are sorry to say we do not think it reflects much credit on its author. Every text-book for schools should present the subject of which it treats, systematically, clearly, and truthfully, however limited the design of the author. It should also present the latest facts in the advancement of the science. The book before us, is the fourth of a series by the same author,—is designed for advanced classes in our schools,—and should therefore give a pretty full and accurate account of the social, political and statistical condition of the world, but more especially of our own country.

In the preface the author says, "The political features are described, including the population as to race and descent, as well as to numbers; the manners and customs of the people, &c., and occasionally, important historical statements." How faithfully he has fulfilled his promise with reference to the United States we will briefly show without taking the trouble to examine it in reference to other countries. The book was issued soon after the close of the Slaveholders' Rebellion, which, for magnitude, and for its political and social consequences, has no parallel in the history of the world, and we think a brief account of this civil war quite essential to a comprehension of the political and social condition of the United States; yet *not a sentence can be found which would suggest to the school boy, that such a war as that of the Great Rebellion ever occurred in this country!*

We are told, on page 88, that by the census of 1860, about one-seventh of the population of the United States were blacks, of whom about 4,000,000 were slaves; but what has become of these slaves and free blacks, no one can tell by reading this book. No mention is further made of them, unless we are to infer that they have undergone a *bleaching* process, and changed into Englishmen, Frenchmen, or some other European or Asiatic race. This idea would seem to receive confirmation from the statement respecting the population of South Carolina, namely, "The population, principally of *English and French* descent, numbers 704,000." According to the census of 1860, about two-thirds of the population of South Carolina were of African descent, about 402,400, slaves, 9,914 free colored, and 291,388 whites. The statement should be "The population, principally of *African* descent, numbers 704,000." The same want of accuracy is manifested in other cases. But let this suffice. We deem the book in its present state, unworthy the patronage of both North and South, and it should be excluded from every school, till the author sees proper to revise its historical features and correct its statistical blunders. P.

The Metric System of Weights and Measures.

Official.

LAWS OF THE UNITED STATES—*Passed at the First Session of the Thirty-Ninth Congress.*

[PUBLIC—No. 183.]

AN ACT to authorize the use of the Metric System of Weights and Measures.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That from and after the passage of this act it shall be lawful throughout the United States of America to employ the Weights and Measures of the Metric System; and no contract or dealing, or pleading in any court, shall be deemed invalid or liable to objection, because the weights or measures expressed or referred to therein are weights or measures of the Metric System.

SECTION 2. *And be it further enacted*, That the tables in the schedule hereto annexed, shall be recognized in the construction of contracts, and in all legal proceedings, as establishing, in terms of the weights and measures now in use in the United States, the equivalents of the weights and measures expressed therein in terms of the metric system; and said tables may be lawfully used for computing, determining, and expressing in customary weights and measures the weights and measures of the metric system.

MEASURES OF LENGTH.

Metric denominations and values.		Equivalents in denominations in use.
Myriameter	10.000 metres.	6.2137 miles.
Kilometer	1.000 metres.	0.62137 miles, or 3280 feet and ten inches.
Hectometer	100 metres.	328 feet and 1 inch.
Dekameter	10 metres.	393.7 inches.
Meter	1 metre.	39.37 inches.
Decimeter	1-10 of a metre.	3.937 inches.
Centimeter	1-100 of a metre.	0.3937 inches.
Millimeter	1-1000 of a metre.	0.0394 inches.

MEASURES OF SURFACE.

Metric denominations and values.		Equivalents in denominations in use.
Centare	10.000 square metres.	2.471 acres.
Hectare	100 square metres.	119.6 square yards.
Are	1 square metre.	1550 square inches.

MEASURES OF CAPACITY.

METRIC DENOMINATIONS AND VALUES.			EQUIVALENTS IN DENOMINATIONS IN USE.	
Names.	Number of liters.	Cubic Measure.	Dry measure.	Liquid or wine measure.
Kiloliter, or stere	1,000	1 cubic meter	1.308 cubic yards	264.17 gallons.
Hectoliter	100	1-10 of a cubic meter	2 bushels and 3.35 pecks	26.417 gallons.
Dekaliter	10	10 cubic decimeters	9.08 quarts	2.6417 gallons.
Liter	1	1 cubic decimeter	0.908 quarts	1.0567 quarts.
Deciliter	1-10	1-10 of a cubic decimeter	6.1022 cubic inches	0.845 gills.
Centiliter	1-100	10 cubic centimeters	0.6102 cubic inches	0.338 fluid ounces.
Milliliter	1-1000	1 cubic centimeter	0.061 cubic inches	0.27 fluid drams.

WEIGHTS.

METRIC DENOMINATIONS AND VALUES.			EQUIVALENTS IN DENOMINATIONS IN USE.
Names.	Number of grams.	Weight of what quantity of water at maximum density.	Avoirdupois weight.
Miller or Tonneau	1,000,000	1 cubic meter	2204.6 pounds.
Quintal	100,000	1 hectoliter	220.46 pounds.
Myriagram	10,000	10 liters	22.046 pounds.
Kilogram or kilo	1,000	1 liter	2.2046 pounds.
Hectogram	100	1 deciliter	3.5274 ounces.
Dekagram	10	10 cubic centimeters	0.3527 ounces.
Gram	1	1 cubic centimeter	15.432 grains.
Decigram	1-10	1-10 of a cubic centimeter	1.5432 grains.
Centigram	1-100	10 cubic millimeters	0.1543 grains.
Milligram	1-1000	1 cubic millimeter	0.0154 grains.

Approved July 28, 1866.

Speech of Hon. Chas. Sumner

IN THE UNITED STATES SENATE, JULY 27TH, 1866.

MR. SUMNER,—Mr. *President*, at another time I might be induced to go into this question at some length; but now, in these latter days of a weary session, and under these heats, I feel that I must be brief. And yet I could not pardon myself if I did not undertake, even at this time, to present a plain and simple account of the great change which is now proposed.

There is something captivating in the idea of one system of weights and measures, which shall be common to all the civilized world; so that, at least in this particular, the confusion of Babel may be overcome. Kindred to this is that other idea of one system of money. And both of these ideas are, perhaps, the forerunners of that grander idea of one language for all the civilized world. Philosophy does not despair of the fulfilment of this aspiration at some distant day; but a common system of weights and measures and a common system of money are already within the sphere of actual legislation. The work has already begun, and it cannot cease until this great object is accomplished.

If the United States seem to come tardily into the circle of nations recognizing a common system of weights and measures, I confess that I have pleasure in calling attention to the historic fact that, at a very early day, this important subject was commended to Congress. Washington in his message to the First Congress touched the key-note when he used the word "uniformity" in connection with this subject. "Uniformity," he said, "in the currency, weights and measures of the United States is an object of great importance aud will, I am persuaded, be attended to." Then again in his message to the next Congress he went further in expressing a desire for a "standard at once *invariable and universal*." In these words he foreshadowed a system that should be common to the civilized world. It is for us now to recognize the standard which he thus sententiously described. All hail to a standard "invariable and universal."

I shall not occupy your time in developing the history of these efforts on the part of our Government. But I cannot forbear mentioning that Mr. Jefferson, while Secretary of State, made an elaborate report, in which he proposed to reduce "every branch to the same decimal ratio already established in coins, and thus bring the calculation of the principal affairs of life within the arithmetic of every man who can multiply and divide plain numbers." Here is an essential element in that common system which we seek to establish. This was in 1790, while France was just beginning those efforts which ended at last in the establishment of the metric system. The subject was revived at different times in Congress without definite result. President Madison, in his annual message of 1816, called attention to it in the following words:

"The great utility of a standard *fixed in its nature and founded on the easy rule of decimal proportions* is sufficiently obvious. It led the Government at an early stage to preparatory steps for introducing it; and a completion of the work will be a just title to the public gratitude."

Out of this recommendation originated that call of the Senate which drew forth the masterly report of John Quincy Adams on the whole subject of weights and measures, where learning, philosophy, and prophetic aspiration vie with each other. After reviewing all that had appeared in the past, and subjecting it all to a careful examination, he says of the metric system of France, which was then only an experiment:

"This system approaches to the ideal perfection of uniformity applied to weights and measures, and whether destined to succeed or doomed to fail, will shed unfading glory upon the age in which it was conceived and upon the nation by which its execution was attempted and has been in part achieved."

This was in 1821, when the metric system, already invented, was still struggling for adoption in France.

This brief sketch will show how from the beginning our Government has been looking to a system which shall be common to the civilized world. And now this aspiration seems about to be fulfilled. The bills before you, which have already passed the other House, if they become a law, will be the practical commencement of the "new order."

Before proceeding to explain the proposed system, consider for one moment the necessity of a change, as illustrated by a glimpse at weights and measures in times past.

Language is, of course, coeval with man as a social being. Weights and measures are hardly less early in their origin. They are essential to the operations of society, and are naturally common to all who belong to the same social circle. At the beginning each people had a system of its own; but as nations gradually intermingle and distant places are brought together by the attractions of commerce, the system of one nation becomes inadequate to the necessities of the composite body. A common system becomes important, just in proportion to the community of interests among different nations. Next to the diversity of languages, the discordant systems of weights and measures attest the insulation of nations.

The earliest measures were naturally derived from the several parts of the human body. Such was the cubit, which was the distance between the elbow and the end of the middle finger, being about twenty-two inches. Such also, were the foot, the hand, the span, the nail, and the thumb. These measures were derived from nature, and they were to be found wherever a human being existed. But they partook of the uncertainty in the proportions of the human form. When Selden, in his Table-Talk, wittily likened equity, so far as it depended on the conscience of the chancellor, to a measure which was determined by the length of the chancellor's foot, he exposed not only the uncertainty of equity, but also the uncertainty of such a measure.

Even in Greece, where art prevailed in the most beautiful forms, the famous *stadium* was none the less uncertain. It was the distance that Hercules could run without taking breath, which, divided by 600, gave the Grecian foot.

Our own standards, derived from England, are of an equally fanciful character. The unit of *length* is the barleycorn, taken from the middle of the ear and well dried. Three of these in a straight line make an inch. The unit of *weight* is a grain of wheat taken, like the barleycorn, from the middle of the ear and well dried. Of these, thirty-two are equal to a pennyweight. Twenty pennyweights make an ounce, and twelve ounces make a pound. The unit of *capacity* is derived

from the weight of grains of wheat. Eight pounds of these make one gallon of wine measure.

Nor is the extreme vagueness and instability of these standards the only matter of surprise. There is no principle of science or convenience in the progression of the different series. Thus we have two pints to a quart, three scruples to a dram, four quarts to a gallon, five quarters to an ell, five and a half yards to a perch, six feet to a fathom, eight furlongs to a mile, twelve inches to a foot, sixteen ounces to a pound, twenty units to a score.

Then, as if the only ruling principle which governed the selection was discord, we have different measures bearing the same name, such as the wine pint and the dry pint, the ounce Troy and the ounce avoirdupois. Take these last two measures as illustrating the prevailing confusion. They both seem to come from France. The Troy weight is supposed to derive its name from the French town of Troyes, where a celebrated fair was once held. The term *avoirdupois* is French, and seems to have been part of a statute which declared how weights should be determined. But Troy and avoirdupois are different measures.

These measures, having constant differences, had accidental differences also, in different parts of England, and also in different parts of our own country. Even where the names are alike the measures are often unlike. In England the diversity was almost infinite, so that these same measures differed in different counties, and sometimes in different towns of the same county. Latterly in the United States the standard has been regulated by law, but the confusion from the measures still continues. The question naturally arises why such confusion has been allowed to continue so long without correction. The answer is easy. Except in rare instances the triumphs of science are slow and gradual. Traditional prejudices must be overcome. Each nation is attached to its own imperfect system, as to its own language. Even though inferior to another system, it has the great advantage of being already known to the people that use it. To this constant impediment it is only proper to add the intrinsic difficulty of establishing a uniform system of weights and measures which shall satisfy the demands of civilization in scientific precision, in immediate practical applicability, and in nomenclature.

Take, for instance, the application of the decimal system, which seems at first sight simple and complete. It is unquestionably an immense improvement on the old confusion; but even here we encounter a difficulty in the circumstance, long since recognized by mathematicians, that our scale of decimal arithmetic is more the child of chance than of philosophy. I know not if any better reason can be given for its adoption than because man has everywhere reckoned by his ten fingers. On this account it has been often called "natural." But on considering whether the number *ten* possesses any intrinsic excellence, convenience, or fitness as a ratio of progression, good authorities have answered in the negative. It is the duplication of an odd number which can furnish, neither a square or a cube, and which cannot be halved without departing from the decimal scale. In this scale we seem to see always those early days when "wild in woods the noble savage ran," and for his arithmetic used his fingers or his toes. An *octaval* system, founded on the number eight, would have been better adapted to the divisions of material things. Among us the decimal system is adopted for money; but you all know that we are not able to carry it into rigid practice. Thus convenience, if not necessity, requires the half dollar, the quarter dollar, the half dime, and the three-cent piece. In fact, eight divisions to the dollar, as prevailed in Spain, are available in the business of life, more than the decimal division. The number *eight* is capable of an indefinite bisection. The progression beginning with 2 would proceed to 4, 8, 16, 32, 64, and so on.

The decimal scale is made easy of use by the happy system of notation borrowed from the Hindoos, which might be applied equally well to an octaval scale. But at this time, it would be vain to propose a change in the radix of the numerical scale. The number *ten* is the recognized starting point, and gives its name to the scale. It only remains for us at present to follow other nations in applying it to an improved system of weights and measures.

A system of weights and measures born of philosophy rather than of chance, is what we now seek. To this end old systems must be abandoned. A chance system cannot be universal. Science is universal. Therefore, what is produced by science may find a home everywhere. If we consider the proper elements or characteristics of such a system we shall find at least three essential conditions. First, the new system must have in itself the assurance of unvarying stability, and, to this end, it should be derived from some standard in nature by which any errors creeping into the weights and measures, from time or imperfect manufacture, may be corrected. Secondly, the parts should be divided decimally, as nearly as practice will warrant, in conformity with our arithmetic. Thirdly, it should be of such a character as to disturb national prejudices as little as possible.

To a common observer the difficulties of finding an unvarying standard are not readily apparent; but philosophy shows that all things in nature are undergoing a constant change, so that there would seem to be no invariable magnitude, the same in all countries and in all times, as Cicero described the great principles of Natural Law, by which a lost standard on an inaccessible island might be reproduced with mathematical certainty. There is but one magnitude in nature, which, so far as we know, approximates to these requisites. I refer, of course, to the length of the pendulum, vibrating seconds, which in our latitude is about 39.1 inches. This length, however, varies in traveling from the equator to the pole, and it also varies slightly under different meridians and the same latitude; but the law of variation has been determined with considerable accuracy. One element in this variation is the difference of temperature. Mr. Jefferson, in his report, on weights and measures, proposed that we should find our standard in the pendulum. At the same time the French Government, just struggling to throw off ancestral institutions, conceived the idea of a new system of weights and measures which, founded in science, should be common to the civilized world.

The French began not only by discarding all old systems, but also by discarding a measure derived from the pendulum. They conceived

the idea of measuring an arc of the meridian of the earth, and finding a new unit in a subdivision of this immense span. At the same time the National Assembly invited the co-operation of other nations, so that the system should become universal. The work proceeded. An arc of the meridian, embracing upward of nine degrees of latitude, and extending from Dunkirk, in France, to the Mediterranean near Barcelona, in Spain, was measured with the most scientific care. Some of the most illustrious names in French science were engaged in it, of whom I may mention Mechain, Delambre, Biot, and Arago, the latter just beginning his great career. The work proceeded, notwithstanding domestic convulsion and foreign war. The reign of terror at home and invasion from abroad did not arrest it. Ten years elapsed before the measurements were completed, when again other nations were invited to co-operate in the establishment of the new system.

The unit of measure adopted was one ten-millionth part of the distance between the equator and the north pole thus measured. It receives the name of *metre*, from the Greek, signifying *measure*. A bar of platinum was carefully prepared representing this length with all possible accuracy. This bar was deposited in the archives of France as the perpetual standard. Other bars have been copied from it and distributed throughout France and in foreign countries.

There is something transcendental in the idea of this measurement of the earth in order to find a measure for daily life. It was an immense undertaking. But the conception seems to have been rather vast than practical. There is reason to believe, from later labors, that there was a serious error in the work. Thus the distance of 10,000,000 meters from the equator to the north pole, established by the French observers, is too small by 935 yards, according to Bessel; by 1,410 yards, according to Puissant; and by 1,967 according to Chazallon. Sir John Herschell has also testified with the authority of his great name against the accuracy of this result. If there be an error, such as is supposed, then the meter ceases to be what it was originally called, one ten-millionth part of the distance from the equator to the north pole.

Even assuming that there is no error, and that the meter is precisely what it purports to be, yet it is not easy to see how the artificial standard can be corrected by a recurrence to the standard in nature. The massive work originally undertaken will not be repeated. The astronomers of France will not verify the accuracy of the bar of platinum which is the artificial standard, by another scientific enterprise, requiring years for its completion. Therefore, for all practical purposes the meter is really nothing else than a bar of platinum of a certain length preserved in the archives of France. It is not less arbitrary as a standard than the yard or foot, and it can be perpetuated in practice only by the distribution of exact copies of the original bar, which is the assumed meter.

I have entered into this explanation of the origin and character of the meter because I desire that the admirable system which is founded on it should be seen actually as it is. To my mind it gains nothing from the theory which presided at its origin. Its unit is not to be regarded as a certain portion of the distance between the equator and the north pole, but as an artificial measure determined with peculiar care. Had the same or any other measure been selected, without any measurement of the earth, the metric system would not have been less beautiful or perfect.

Look now at the system. The meter, which is assumed to be one ten-millionth part of the distance from the equator to the poles, is, in fact, 39¼ inches or 39.37 inches in length. It is especially the unit of *length*, but it is also the unit from which all measures of weight and capacity, square or cubic, are derived. It is at once foundation-stone and cap-stone to the whole system. It is foundation-stone to all in the ascending series and cap-stone to all in the descending series.

The unit of *measures of surface* or land measures is the *are*, from the Latin *area*, and is the square of ten meters, or, in other words, a square of which each side is ten meters in length.

The unit of *solid measure* is the *stere*, from the Greek, and is the cube of a meter, or, in other words, a solid mass one meter long, one meter broad, and one meter high.

The unit of *liquid measure* is the *liter*, from the Greek, and is the cube of the tenth part of the meter, which is the *decimeter*, or, in other words, it is a vessel, where by interior measurement each side and the bottom are square *decimeters*.

The unit of weight is the *gram*, also derived from the Greek, and is the one-thousandth part of the weight of a cubic liter of distilled water—at its greatest density—this being just above the freezing point.

Such are the main elements of the metric system. But each of these has its multiples and its subdivisions. It is multiplied decimally upward and divided decimally downward. The multiples are derived from the Greek. Thus, *deca*, ten; *hecto*, hundred; *kilo*, thousand; and *myria*, ten thousand, prefixed to meter, signify ten meters, one thousand meters, and ten thousand meters. The subdivisions are derived from the Latin. Thus *deci*, *centi*, *milli*, prefixed to meter, signify one-tenth, one-hundredth, and one-thousandth of a meter.

These same prefixes may be applied in ascending and descending scales to the are, the liter and the gram. Thus, for example, we have in the ascending scale, *deca*gram, *hecto*gram, *kilo*gram, and *myria*gram; and in the descending scale, *deci*gram, *centi*gram, *milli*gram.

In this brief space you behold the whole metric system of weights and measures. What a contrast to the anterior confusion! A boy at school can master the metric system in an afternoon. Months, if not years, are required to store away the perplexities, incongruities, and inconsistencies of the existing weights and measures; and then memory must often fail in reproducing them. The mystery of compound arithmetic is essential in the calculations which they require. All this is done away by the decimal progression, so that the first four rules of arithmetic are ample for the pupil.

If we look closely at the metric system we must confess its simplicity and symmetry. Like every creation of science, it is according to rule. Master the rule and you master the system. On this account it may be acquired by the young with comparative facility, and when once acquired it may be used with dispatch. Thus it becomes labor-saving and time-saving. I cannot hesitate to

mention among its merits the nomenclature which it has adopted. A superficial criticism has objected to the Greek and Latin prefixes; but this forgets that a system intended for universal adoption must discard all local or national terms. The prefixes employed are equally intelligible in all countries. They are no more French than English or German. They are in their nature common or cosmopolitan. And in all countries they are equally suggestive in disclosing the denomination of the measure. They combine the peculiar advantages of a universal name and a definition. The name instantly suggests the measure with exquisite precision. If these words seem to be scholastic or pedantic you must bear this for the sake of their universality and defining power.

Unquestionably it is difficult for a generation to substitute a new system for that which it learned in childhood. Even in France the metric system was tardily adopted. Napoleon himself, on one occasion, said impatiently to an engineer who answered his inquiry in meters—"What are meters? Tell me in *toises*." It was only in 1840 that the system was definitely required in the transaction of business. Since then it has been the legal system of France. Cloth is sold by the meter. Roads are measured by the kilometer. Meat is sold by the kilogram, or as it is familiarly abridged, by so many *kilos*.

It is generally admitted that the names are too long, although nobody has been able to suggest substitutes, unless we regard the various abridgments in that light. But no abridgment should be allowed to sacrifice that cosmoplitan character which belongs to the system. Thus in England a nomenclature has been proposed which would secure short names; but these names would be different in each language, and would be entirely different from the French names. This is a mistake. The names in all languages should be identical, or so nearly alike as to be recognized at once. This may be accomplished by an abbreviated nomenclature.

For instance, we may say *met*, *ar*, *lit*, and *gram*; and, in describing the denomination, we may say in the ascending scale *dec*, *hec*, *kil*, and in the descending scale *dec*, *cen*, and *mil*, indicating respectively 10, 100, 1000, and 1-10, 1-100, and 1-1000. Compounding these words we should have, for example, *kilmet*, *killit*, *kilgram*, and *cenmet*, *cenlit*, *cengram*. These abbreviations might be substantially the same in all languages. They would preserve the characteristics of the unabridged terms, so that the simple mention of the measure, even in this abridged form, would disclose the proportion which it bears to its fellow-measures. Previous measures have been represented by monosyllables; as grain, dram, gross, ounce, pound, stone, ton. Where a word is often repeated in the hurry of business it is instinctively abridged. We shall not err if we profit by this experience, and seek to reduce the new nomenclature to its smallest proportions.

Twelve words are all that are required by this system. In learning these you learn all. There are the five words designating the different units of length, surface, solid capacity, liquid capacity, and weight. Then there are the seven prefixes, being four in the ascending scale, expressing *multiples* or augmentations of the meter or other units, derived from the Greek; and also three in the descending scale, expressing subdivisions or diminutions of the meter and other units, derived from the Latin. These twelve words contain the whole system.

In closing this chapter of the unquestionable advantages of the metric system, I must not forget that it is already the received system in the majority of countries. Thus it appeared at the Statistical Congress assembled at Berlin in 1863, that it was adopted partly or entirely in Austria, Baden, Bavaria, Belgium, France, Hamburg, Hanover, Hesse, Mecklenburg, the Netherlands, Parma, Portugal, Saxony, Sardinia, Spain, Switzerland, Tuscany, the Two Sicilies, and Wurtemburg. Since then Great Britian, by an act of Parliament, has added her name to this list. The first step is taken there by making the metric system *permissive*, as is now proposed in the bills before Congress. The example of Great Britian is of especial importance to us, since the commercial relations between the two countries render it essential that there should be a common system of weights and measures. On this point we cannot afford to differ from each other.

The adoption of the metric system by the United States will go far to complete that circle by which this great improvement will be assured to mankind. Here is a new agent of civilization which will be felt in all the concerns of life, at home and abroad. It will be hardly less importaat than the Arabic numerals, by which the operations of arithmetic are rendered common to all nations. It will help undo that primeval confusion of which the Tower of Babel was the representative.

As the first practical step to this great end I ask the Senate to give its sanction to the bills which have already passed the other House, and which I have reported from the special committee on the metric system. By these enactments the metric system will be presented to the American people, and will become an approved instrument of commerce. It will not be forced into use, but will be left for the present to its own intrinsic merits. Meanwhile it must be taught in the schools. Arithmetics must explain it. They who have already passed a certain period of life may not adopt it; but the rising generation will embrace it and ever afterwards number it among the choicest possessions of an advanced civilization.

Selections from Exchanges.

Dr. Arnold, The Teacher.

"The career of Thomas Arnold, the distinguished instructor of youth, though teeming with the poetry of common life, was not one of stirring incident, or romance; it consisted in laboring to do his best in his sacred vocation. Born in England in 1795, he was educated at Winchester College, and in 1827 became head-master of Rugby School. He died in 1842, at the early age of forty-seven.

His professional life began at Rugby; and he plunged into fourteen years of uninterrupted toil. Holding labor to be his appointed lot on earth, he harnessed himself cheerfully to his work. A craving for rest was to him a sure sign that neither mind nor body retained its pristine vigor; and he determined, while blessed with health, to

proceed like the camel in the wilderness, and die with his burden on his back. His characteristic trait was intense earnestness. He felt life keenly; its responsibilities as well as its enjoyments. His very pleasures were earnest. In nothing was he indifferent or neutral.

His principles were few: the fear of God was the beginning of his wisdom, and his object was not so much to teach knowledge, as the means of acquiring it; to furnish, in a word, the key to the temple. He desired to awaken the intellect of each individual boy, and contended that the main movement must come from *within*, and not from *without* the pupil; and that all that *could*, should be done *by* him, and not *for* him.

In a word, his scheme was to call forth in the little world of school those capabilities which best fitted boys for their career in the great world. He was not only possessed of strength, but had the art of imparting it; he had the power to grasp a subject himself, and then ingraft it on the intellect of others.

His pupils were made to feel that there was a work for them to do; that their happiness, as well as their duty, lay in doing that work well. Hence an indescribable zest was communicated to a young man's feeling about life; a strange joy came over him on discerning that he had the means of being useful, and thus of being happy. He was inspired with an humble, profound, and most religious consciousness that work is the appointed calling of man on earth; the element in which his nature is ordained to develop itself, and in which his progressive advancement toward heaven is to lie.

The three ends at which Arnold aimed, in the order of their relative importance, were first and foremost to inculcate religious and moral principle, them gentlemanly conduct, and lastly intellectual ability. To his mind, religion and politics—the doing one's duty to God and to man—were the two things really wanting. Unlike the schoolmasters of his early life, he held all the scholarship man ever had to be infinitely worthless in comparison with even a very humble degree of spiritual advancement.

He loved tuition for itself, of which he fully felt the solemn responsibility and the ideal beauty, and which he was among the first to elevate to its true dignity. It was the destiny and business of his entire life. His own youthfulness of temperament and vigor fitted him better for the society of the young than of the old; he enjoyed their spring of mind and body, and by personal intercourse hoped to train up and mould to good their pliant minds, while wax to receive, and marble to retain.

He led his pupils to place implicit trust in his decisions, and to esteem his approbation as their highest reward. He gained his end by treating them as gentlemen, as reasonable beings, in whose conscience and common sense he might confide; and to this appeal to their nobler faculties, to his relying on their honor, the ingenuous youth responded worthily.

Once, at Laleham, when teaching a rather dull boy, he spoke somewhat sharply to him, on which the pupil looked up in his face, and said, "Why do you speak so angrily, sir?—*indeed*, I am doing the best I can." Arnold at once acknowledged his error, and expressed his regret for it. Years afterward he used to tell the story to his children, and added, "I never felt so much in my life: that look and that speech I have never forgotten."

One of his principal holds was in his boy-sermons; that is, in sermons to which his young congregation could and did listen, and of which he was the absolute inventor. The secret of that power lay in its intimate connection with the man himself. He spoke with both spiritual and temporal authority, and truths divine seemed mended by the tongue of an expounder whose discourse was a living one,—doctrine in action,—and where precept was enforced by example.

His was the exhibition of a simple, earnest man, who practiced what he preached, who probed the depths of life, and expressed strongly and plainly his love of goodness and abhorrence of sin. There was, indeed, a moral supremacy in him; his eyes looked into the heart, and all that was base and mean cowered before him; and, when he preached, a sympathetic thrill ran through his audience.

The Newspaper Exercise.

Books cannot always please, however good.—CRABBE.

The lack of general intelligence in our schools is surprising. Pupils ready in the discussion of algebraic formulæ or Latin analysis will respond to a question pertaining to every-day life with a stare of the most artless innocence. They are searching, ready students, versed in the definitions of the books,—but as apparently ignorant and regardless of the great world swaying around them as though fingering their lexicons amid the rings of Saturn. This narrowness of mental comprehension is easily accounted for. Diligent pupils are so closely occupied with lessons that they have little leisure for reading; while idle heads that have no interest in study have generally no interest in any thing else. Again, the home atmosphere, in its conversations and instructions, should exert an ever-active influence on the growing mind; but in how many families are the news of the day and the questions of literature commented upon at the dinner-table or by the fireside? Even in the case of children fond of reading, this fondness craves simply the love-romance, the tragic tale, rejecting aught sober, solid, or instructive. In short, to prove the truth of these statements, let any one take ten or twelve of the most prominent items from the current events of the day, and propose them for the consideration of the larger boys and girls of a school. How soon the bright eye will lose its lustre, and the downcast face assume an expression of despair! To meet this deficiency of general knowlege, the introduction of the newspaper into the school-room will be found very effective.

Take some half-hour once a week—say the last half-hour on Friday, as all lessons then are over and the minds of the pupils are free,—require books and slates to be put away, and all to fasten their eyes intently on their beloved preceptor. School and teacher are resolved into a Committee of the Whole: there is perfect liberty to ask or answer, suggest or refute. You sit before the thirsting minds, paper in hand, and run your learned eye over the columns. The telegraph reports "The Fenians concentrating in Maine." Will some one tell me who the Fenians are, what their object? An ominous silence. Finally, a faint voice; "Men to free Ireland." But why to free Ireland? They will now be ready for a brief explanation of the wrongs Green Erin has suffered

for ages from the English, and the unsuccessful rebellion, headed by her noble sons. You read again: "The Imperialists losing ground in Mexico." Where is Mexico,—its productions, surface, people—who are the Imperialists, and with whom are they fighting? Susan has heard her father say that Maximilian is carrying on a war against the Mexicans, but does'nt exactly know what for. The answers to the geographical queries which some can perhaps give, will serve to review their information in that science; but to place the reasons for the Austrian's presence in that sunny land will call for some familiar allusions on your part to France, Louis Napoleon, Mexico and her sad scenes of turmoil from the times of Cortez. So on through the events carried over the wires.

"New Books: Snow-Bound. A Winter Idyl, by John G. Whittier. Boston: Ticknor & Fields. Letters of Life, by Mrs. L. H. Sigourney, 8vo. New York: D. Appleton & Co." Here is room for dozens of inquiries: What is an idyl—who is Whittier—what else has he written—what do you know about Boston—what periodicals do Ticknor & Fields publish—who is Mrs. Sigourney—what is meant by 8vo—what wonders and men in New York? "Gordon Cumming, the African traveler, is dead," What other travelers in Africa, or any where—our greatest traveler? "Spurgeon smokes and drinks beer." Who is he—can you name same eminent preachers, living or dead? Thus, glancing your eye over the page and keeping in view the peculiar wants of your hearers, you can not fail to find a variety of morsels—biographical, tragic, sentimental, accidental, foreign, domestic, ancient, and modern—that will be quite acceptable to their intellectual palates. A few excellent jests from Frank Leslie's *Budget of Fun* given between the soberer items, will relieve attention and add seasoning to the dish,—serve as sugar coating to the solid substance. W. W. D.

Illinois Teacher.

Variety in Thought.

The word *man* when traced back to the farthest glimmering of its history is found to have its origin in a root-word which signifies *a thinker*. Not only by the primary signification of his name, however, but by the design of his Creator, man is constituted a thinker. Hence those who confine their thoughts to the limited range of topics suggested by the routine of their occupation and matters connected with their domestic arrangements and wants are apt to make a miserable failure in life, not a failure so far as physical subsistence is concerned, but a criminal failure in what relates to the culture of mind and heart.

The variety of faculty and susceptibility with which God has endowed man in his intellectual, social and religious nature ally him on one side to the angels above him, on the other to the angels below him. He who, like Bunyan's man with the muck rake, is so intently engaged in gathering up the perishable things about him that he fails to see the shining prizes just above him, and he who would feed his soul with metaphysics, or indeed with any *one* kind of aliment, must be egregiously one-sided.

Let the idea, then, be deeply impressed upon the mind that no one can be healthy and well balanced in thought and feeling whose thoughts all centre about one idea or one class of ideas. Some men are excellent tradesmen and artisans, but nothing more; their thoughts and energies are all expended in their "line of business," leaving no time nor inclination for the culture of their higher powers. Sometimes a woman may be found who is a model housekeeper—which is an accomplishment by no means to be disparaged—but nothing above and beyond that. Much happier, much more useful might such characters be, did they daily rest their minds and reinvigorate and balance their thoughts by reading and thinking upon subjects outside of and altogether different from the uniform routine of daily life.

The teacher who concerns himself only about what relates to his school and the branches he teaches—a sort of walking book-worm, (if worms can be said to walk), full of puzzling problems, knotty sentences, and other bookish conceits which he delights to push at you whenever and wherever he can, may be a moderately successful teacher, but he is nothing more; he cannot be said to be "a man among men," he is a mere thing—a machine. So the farmer who thinks only of crops, soil, manures, markets and cattle, may become rich, but his life will be a miserable failure.—*Lewistown Gazette.*

Life too Short for Strife.

Chas. Dickens relates the following of Douglas Jerrold: Of his generosity I had a proof within these two or three years, which it saddens me to think of now. There had been estrangement between us—not on any personal subject, and not involving angry words—and a good many months had passed without my ever seeing him in the streets, when it fell out that we dined, each with his own separate party, in the Stranger's Room of the Club. Our chairs were almost back to back, and I took mine after he was seated and at dinner, (I am sorry to remember,) and did not look that way. Before we had sat long, he openly wheeled his chair around, stretched out both hands in an engaging manner, and said aloud, with a bright and loving face, that I can see as I write to you: "Let us be friends again. A life is not long enough for this." Jerrold was not a Christian, but his conduct in this case was worthy of a Christian character. On a dying bed how insignificant will appear many things about which we contend in bitterness and wrath! Life is too short, its inevitable sorrows so many, its responsibilities so vast and solemn, that there is, indeed, no time to spare in abusing and maligning one another. Let not the sun go down on your wrath. Never close your eyes to sleep with your heart angry towards your brother and fellow sufferer. See him and be reconciled if you can. If you cannot see him, write to him. If he is a true man and a Christian, he will listen. If he is not you will have done right, and your soul will be bright with the sunshine of Heaven.

THE GETTYSBURG MONUMENT: The contract for the erection of the Soldiers' National Monument, on the Gettysburg battle-field, has been awarded to James G. Patterson, of Hartford, Connecticut, for the sum of $47,500. The main shaft will be built of white granite, and the statuary will be made of Italian weather marble. The statuary will be modeled in Rome by the most celebrated American artists. The time given for the completion of the work is July 1st, 1868. It is thought that this monument, when finished, will surpass in architectural beauty any other of its kind in the world.